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ABSTRACT

This document examines the school-to-work transition issue from a state, national, and global perspective. Chapter 1 explores problems facing youths entering the job market, demands of the global marketplace and changing economy, critical skills needed by workers, and benefits of integrating academic and workplace skills in the classroom. Chapter 2 examines how the United States' chief competitors--Japan, England, Germany, Sweden, and Denmark--are educating their workers. Chapter 3 looks at models for integrating school and the workplace. Chapter 4 considers national policies and initiatives; Chapter 5 explores Texas policy and initiatives. Chapter 6 examines promising school-to-work efforts in other states. Chapter 7 looks at examples of school-to-work transition efforts and promising practices in Texas schools and communities. Chapter 8 offers examples of how teachers can integrate skills and competencies recommended by the Secretary's Commission on Achieving Necessary Skills (SCANS) into classroom activities. Chapter 9 offers strategies counselors and parents can use to help prepare young people for the world of work. Chapter 10 offers suggestions on how schools and businesses can form partnerships, how teachers can incorporate job-related elements into classrooms, and how employers can support the school-to-work transition process. Appendixes include the following lists of resources: publications, newsletters, national organizations, Texas organizations, tech prep consortia contact persons, state-level contacts, and regional contacts for federal and state programs. An index is provided. Contains 91 references. (YLB)

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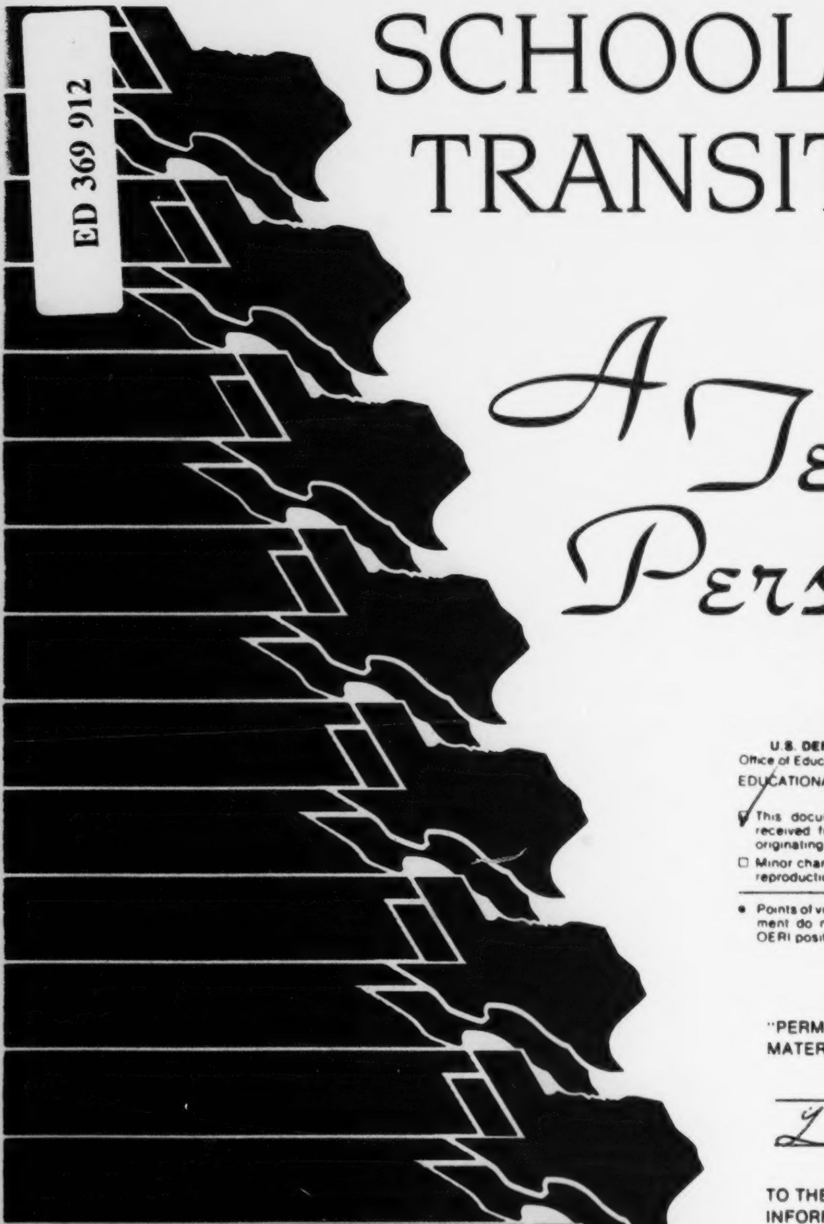

SCHOOL-TO-WORK TRANSITION

A Texas Perspective

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SCHOOL-TO-WORK TRANSITION

A Texas Perspective

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Executive Summary of Findings

American schools, including those in Texas, have traditionally focused their efforts on preparing young people for college. Yet only about 50 percent of young people pursue a college education. The career needs of the remaining youths, called the "forgotten half" by the William T. Grant Foundation (1988), have been largely ignored. These young people have frequently been left to fend for themselves in preparing for life outside of school. And often both the "forgotten half," as well as youths who plan to attend college, have not been exposed to a broad range of career options, or taught the skills needed to succeed in those careers. They see school and the workplace as totally separate worlds, each bearing little relation to the other. As a result, many students are not prepared to make the transition from school to work.

The developing global economy demands changes in how young people are prepared for the world of work. A global high-skills marketplace is developing. America's ability to compete effectively in the world market, thus ensuring the social and economic well-being of its people, depends on high-skills jobs and a highly skilled work force. That means increasing the skills of all youths–not just those who plan to attend college. The skills needed by all workers in the new global economy have been identified by the Secretary's Commission on Achieving Necessary Skills (SCANS) as the following:

- **Basic skills**, including reading, writing, mathematics, speaking, and listening; **thinking skills**, including the abilities to learn, reason, think creatively, make decisions, and solve problems; and **personal qualities**, such as individual responsibility, self-esteem and self-management, sociability, and integrity; and
- **Workplace competencies**, including the abilities to use resources, exercise good interpersonal skills, skillfully use information, understand systems, and understand and use technology.

This document explores the problems learners face as they leave school and enter the work force; examines the changing economy and the demands it places on learners; looks at the concept of a "highly skilled work force"; examines national- and state-level efforts; and offers ideas and programs which schools, businesses, and communities can use to help youths make a smoother transition from the classroom to the workplace.

> "Our country is locked in a time warp, wedded to a world view and to strategies long since outmoded by events."
>
> *Thinking for Living: Education and the Wealth of Nations*, Ray Marshall and Marc Tucker, p. xviii.

No one program or technique will work for all students; rather, good school-to-work-transition calls for systemic processes. Research suggests that systemic implementation of the following concepts is especially beneficial in helping learners make the transition from school to work:

- **Work force readiness will be enhanced if exposure to career options begins in kindergarten and continues through high school.** Intensive career and guidance counseling should be available for all youths and adults.

- **All students should be taught good reading, mathematical, writing, listening, and speaking skills. All students should be taught higher-order thinking skills and learn group problem-solving skills.**

- **Students will be better prepared for life outside of school if school activities are made more relevant to the real world.** Students must understand the relevance of their studies to their future lives. Classroom activities should focus on applied learning and real-life skills, and avoid rote memorization. Academic classes should integrate work force skills into daily lessons, and career preparation classes should include a strong academic component. The skills and competencies identified by the Secretary's Commission on Achieving Necessary Skills (SCANS) should become an integral component of most coursework, whether academic or career preparatory.

- **Young people who do not plan to attend college are in urgent need of new or enhanced programs which develop their workplace skills and prepare them for life outside of school.** Among the program types which show great promise are youth apprenticeships and Tech-Prep.

- **Schools, businesses, and communities must strive to help all students meet the same high academic standards.** Most practices which track young people into "low-level" courses do not benefit students.

- **Students will gain a better grasp of what the real world expects of them if assessments emphasize performance-based practices, such as task performance and portfolio assessments, rather than multiple-choice examinations.** Standardized tests do not mirror the challenges students will face in real life: a learner's success in the workplace rarely depends on reciting facts or choosing the correct answer on a multiple choice form. In real life, workplace success is usually judged by the employee's ability to perform tasks well, make effective decisions, interact well with other people, and take responsibility for actions and decisions.

- **Schools, businesses, and communities must intensify efforts to recover learners who have dropped out of high school, and help them enroll in regular school or alternative programs and succeed.**

- **Experts suggest that America should develop national performance-based assessments,** all benchmarked to the same high standards, to ensure that all schools and students are striving to meet the same high goals. These assessments should lead to certificates of competency.

- **Schools, businesses, and communities should strive to help all students successfully complete high school with the skills necessary to pursue a college degree or further technical training.**

> *An African proverb says, "It takes an entire village to educate a child." Parental, business, and community involvement in students' education is crucial.*

- **An African proverb says, "It takes an entire village to educate a child." Parental, business, and community involvement in students' education is crucial.** Schools should seek partnerships with businesses and community representatives. Similarly, at the state and national levels, business and education entities should cooperate more closely to improve student skills. Research suggests that the following actions will be helpful:

  Business should take a more active role in letting schools know what skills it needs in employees. Employees should volunteer their time and talents to help young people succeed in school, and demonstrate various career options to them. Businesses should invite teachers and students into the workplace, offering them opportunities for summer employment or internships, thus increasing their understanding of workplace demands. Most businesses which offer high wages and good benefits rarely hire recent graduates. Instead, they prefer to hire entry-level employees who have reached their mid-twenties. By so doing, say Glover and Marshall (1993), businesses "choose against youth." Businesses should show support for education and youth by hiring young people for responsible jobs that pay above minimum wage.

  Parents model behavior for their children. Parents can take a more active role in helping their children succeed in school and the workplace. Parents should support schools' efforts, and, to the extent possible, expose children to the world of work.

  Communities must show support for youths by providing them with needed services and support, and expanding youths' opportunities for meaningful contributions to society through service or employment.

Introduction

In 1991, about 200,000 Texas youths between the ages of 16 and 24 were out of school and unemployed. Most were not jobless by choice. Instead, they were often victims of poor preparation for the transition from school to work. These young people are part of what the Commission on the Skills of the American Workforce (1990) called the "Forgotten Half": forgotten because American education has usually concentrated its efforts on the needs of students who plan to attend colleges and universities. Typically, about half of all American high school students attend colleges or universities, where they hope to learn skills which will secure them places in the work force.

But the workplace skill needs of young people who do not plan to attend college are frequently ignored. Often schools and communities have not challenged these students to reach the same level of academic achievement that youths who are planning to attend college are expected to master. Instead, youths who do not plan to attend college frequently are "tracked" into academically unchallenging courses. Often the work force preparation they receive is minimal. So they leave high school prepared only for low-paying, low-skill employment.

Even young people who attend college find, when they enter the work force, that what they learned in school is often vastly different from what employers expect of them on the job. Although they may have performed satisfactorily academically, sometimes these youths find that they have not learned the skills employers value in workers: the abilities to make decisions, take responsibility for actions, learn actively and constantly, and participate in group problem-solving, among others.

> *"One argument for changing our schools is that the world in and for which they were designed no longer exists."*
>
> *One Student at a Time*, State Board of Education Task Force on High School Education, p. 9.

So young people who attend college, as well as those who do not, frequently are not prepared to enter the working world. This issue is assuming vast importance as the U.S. prepares to enter the high-skills, high-stakes global marketplace of the 21st century.

The purposes of *School-to-Work Transition: A Texas Perspective* are to (1) provide a broad overview of the complex facets of the school-to-work transition issue; (2) offer food for thought; and (3) supply the reader with the resources for further action or study. This document examines the school-to-work transition issue from a state, national, and global perspective. Because the responsibility of preparing students to enter the "real world" falls to businesses, parents, and communities, as well as educators, this document takes a broad perspective. It looks at the many facets of the problem, examines how other countries educate their citizens, explores national and state policies and initiatives in the area, and describes promising programs and activities in Texas and other states. The last three chapters of the publication are devoted to strategies which educators, businesses, and communities can implement to help prepare young people for life outside of school.

Chapter One, "The Rocky Path to Workplace Success," offers an in-depth look at the problems which face youths as they enter the job market, the origins of the American work force preparation system, the demands of the global marketplace and the changing American economy, and the proliferation of high-skills jobs. It looks briefly at what the Secretary's Commission on Achieving Necessary Skills (SCANS) and other experts have identified as the critical skills needed by current and future workers, and examines the benefits of integrating academic and workplace skills in the classroom.

Chapter Two examines how America's chief competitors in the global marketplace–Japan, England, Germany, Sweden, and Denmark–are educating their learners.

Chapter Three looks at models for integrating school and the workplace. Among these are integration of vocational and academic education, "focused" schools, career academies, Tech-Prep, school/business partnerships, youth apprenticeships, cooperative education, alternative programs, school-based enterprises, and youth service and community service learning.

Chapter Four looks at national policies and initiatives. Among these are the work of the SCANS commission, national youth apprenticeship efforts, the Job Training Partnership Act, the Carl D. Perkins Vocational and Applied Technology Education Act, the School-to-Work Opportunities Act of 1993, and the New Standards Project.

Chapter Five explores Texas policy and initiatives, including the Texas Council on Workforce and Economic Competitiveness, "Smart Jobs" and Texas Skills Development program, Quality Work Force Planning Committees, the State Occupational Information Coordinating Committee, the Texas Education Agency's new *Master Plan for Career and Technical Education*, Texas' involvement in the New Standards Project, pilot programs for integrating vocational and academic education, Tech-Prep initiatives, apprenticeship legislation, the work of the Committee on Student Learning, and proposals by State Comptroller John Sharp.

Chapter Six examines promising school-to-work efforts in other states. Efforts examined include student apprenticeships, human resource investment planning bodies, youth community service, technical preparation (Tech-Prep), school/business partnerships, alternative learning centers, new pathways to postsecondary education, and creative funding mechanisms for human investment.

Chapter Seven, "Efforts in Texas Schools and Communities which Improve Students' Work Force Preparation," looks at examples of school-to-work transition efforts and promising practices in Texas schools and communities.

Chapter Eight offers examples of how teachers can integrate SCANS skills and competencies into classroom activities.

Chapter Nine, "Helping Learners Make Better Choices," offers strategies counselors and parents can use to help prepare young people for the world of work.

Chapter Ten, "Strategies for Developing Linkages Between Classrooms and the Workplace," offers suggestions about how schools and businesses can form partnerships, how teachers can incorporate job-related elements into classrooms, and how employers can support the school-to-work transition process.

The **Appendix** contains resources and contact persons for readers desiring more information to support further research or developmental activities.

Chapter 1

The Rocky Path to Workplace Success

“America may have the worst school-to-work transition system of any advanced industrial country,” reported the Commission on the Skills of the American Workforce in 1990.[1] American primary and secondary schools frequently provide young people with excellent preparation for further training in colleges and universities. However, the U.S. education system often fails to provide adequate work force skills to young people who do not plan to attend college.

Today American schools concentrate their efforts on preparing young people to enter colleges and universities. Yet only about 50 percent of high school graduates pursue postsecondary education, which in turn trains them for careers. Of that 50 percent, only about half obtain a baccalaureate degree.[2] Young people who do not attend college–those the William T. Grant Foundation termed the “Forgotten Half”[3]–must find employment on their own, or with help from friends and relatives, with whatever skills they have gained so far. Often they have problems finding or keeping jobs. Says Kazis (1993):

> Young people who enter the job market after dropping out or completing high school flounder around, learning little in the way of productive job skills, moving from job to job, dropping in and out of the labor force and connecting intermittently with adults in the workplace. During this period in their lives, young people experience rates of unemployment higher than those of adults, earn lower wages than adults, and spend longer stretches out of work and out of the labor force than adults.[4]

The Business of Business is Education
The Business of Education is Work
The Business of Everyone is Change

Nan Stone, *Harvard Business Review*, March/April 1991.

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[1] National Center on Education and the Economy, ***America's Choice: High Skills or Low Wages***, (Washington, DC: Commission on the Skills of The American Workforce, 1990): p. 4.

[2] Robert W. Glover and Ray Marshall, "Improving the School-to-Work Transition of American Adolescents," ***Teachers College Record*** (Spring, 1993): p. 588.

[3] Wiliam T. Grant Foundation Commission on Work, Family and Citizenship, ***The Forgotten Half: Non-College Youth in America***, (Washington, DC: William T. Grant Foundation, 1988): p. 1.

[4] Richard Kazis, ***Improving the Transition from School to Work in the United States***, (Washington, DC: American Youth Policy Forum Competiveness Policy Council, Jobs for the Future, 1993).

New jobs in the year 2000 will require about two years of education beyond high school. Many Texas youths will not be prepared for that world.

The picture does not improve for many young people as they mature: roughly one-third of all high school dropouts and graduates will fail to find stable employment by age 30.[5]

The Texas Picture

Texas youths are not immune to employment problems. In 1991, about 200,000 Texas youths between the ages of 16 and 24 were unemployed. That year the overall unemployment rate in Texas was 6.6 percent.[6] However, the 93,000 youths ages 16 through 19 experienced an unemployment rate of 20 percent. About 11 percent of the 113,000 youths ages 20 through 24 were unemployed.[7]

Workplace entry is especially difficult for high school dropouts, who have far higher unemployment rates than high school graduates. According to a report by the Lyndon Baines Johnson School of Public Affairs at the University of Texas at Austin, one-third of Texas students drop out before they complete high school. The report also says that Texas, with its population of 19 million, has more school dropouts than the entire nation of Japan, which has a population of 129 million.[8]

These figures foretell potentially serious consequences for the future Texas work force and economy. Some of these consequences are already apparent. A 1991 report by the Texas Literacy Council found that 43 percent of Texas employers experienced difficulty in hiring entry-level employees who possessed basic skills in reading, writing, and mathematics. The study also found that 33 percent of Texans were functionally illiterate, and that Texas ranked 47th among the 50 states in adult literacy levels.[9] Texas ranks 42nd among the states in the total number of students who successfully complete high school and receive a diploma.[10]

Future Texas: Low Skills, Low Wages?

If predictions are correct, new jobs in the year 2000 will require about two years of education beyond high school. Many Texas youths will not be prepared for that world. In its report, *One Student At A Time,* the Texas State Board of Education's Task Force on High School Education reported that "tens of thousands of our students are dropping out without diplomas and many more thousands are taking watered down courses that allow them to perform at academic levels below what should be acceptable and will be required. This evident lack of excellence and equity in the academic preparation of tomorrow's parents, neighbors, voters, workers, and leaders imperils Texas as gravely as any threat in our state's history."[11]

"Many (people) observe that Texas is choosing to compete in the global economy on the basis of low-wage, low-skill jobs."

Texas Research League

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[5] Paul Osterman, ***Is There a Problem With the Youth Labor Market, and If So How Should We Fix It?*** Research paper. (Cambridge, Massachusetts: Sloan School of Management, Massachusetts Institute of Technology, 1992).

[6] Texas Department of Commerce, ***The State of Texas*** (Newsletter), (Austin, Texas: Texas Department of Commerce, January 1993): p. 2.

[7] State Comptroller John Sharp, ***Against the Grain: High Quality Low-Cost Government for Texas***, (Austin, Texas: Texas Comptroller of Public Accounts, 1993): p. 109.

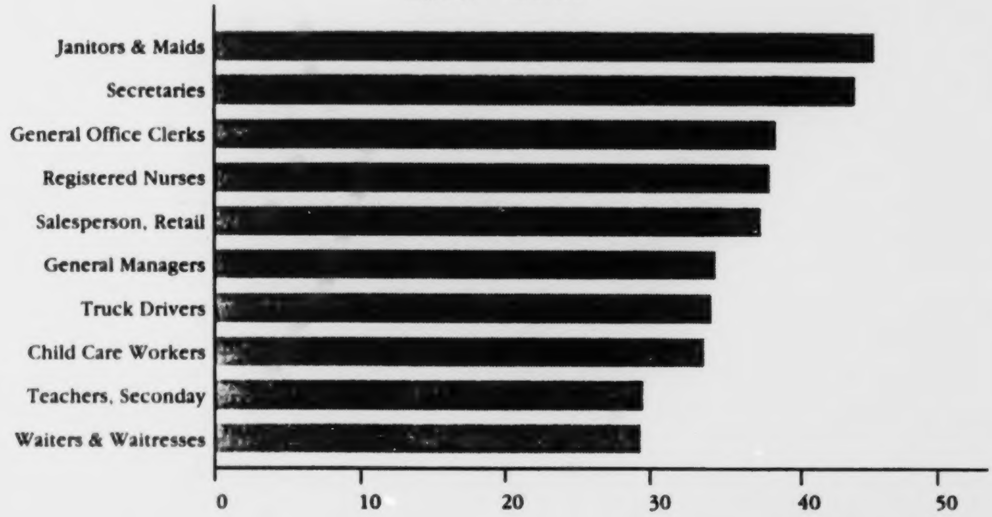
[8] Robert W. Glover and Kenneth W. Tolo, et al., ***Bridging the Gap: Implementing School-to-Work Transition in Austin***, (Austin, Texas: Lyndon Baines Johnson School of Public Affairs, The University of Texas at Austin, 1993): p. 33.

[9] Texas Literacy Council, ***Developing Human Capital***, (Austin, Texas: Texas Literacy Council, 1991).

[10] Texas State Board of Education Task Force on High School Education, ***One Student At A Time***, (Austin, Texas: Texas State Board of Education): p. 10.

[11] Texas State Board of Education Task Force on High School Education, pp. 11-12.

Figure 1
Occupations Adding the Most Jobs
1989 - 2000



Source: Texas Employment Commission

If the skills of its future workers do not improve, Texas could face economic disaster. In the past, workers with relatively low skill levels could secure good jobs in the oil, natural gas, ranching, or farming industries. But the 1980s saw the collapse of these industries as the foundation of the Texas economy. In the early 1990s most Texas job growth is occurring in low-paying service jobs, with janitors, maids, and cleaners gaining the most jobs (see Figure 1). This trend prompted the Texas Research League (1992) to comment, "many (people) observe that Texas is choosing to compete in the global economy on the basis of low-wage, low-skill jobs."[12]

A low-skill, low-wage economy would have important consequences for the state's economic future. Poorly paid workers do not have the buying power of more affluent workers. Some workers might find it more lucrative to join the welfare system than to work for scant wages. Low-wage jobs also mean less tax revenue for the state. An economy based on service industries is not stable without a healthy manufacturing base. To ensure a prosperous future for Texas, the state must produce quality products and services that can compete in a global economy.

One key to economic prosperity is a highly educated work force, says the Texas Research League.[13] Business leaders concur. In a Texas Department of Commerce survey of 350 leading business executives, 87 percent said that a skilled work force was one of the most important factors in choosing a place to relocate or expand.[14]

Governor Ann Richards has often proclaimed her goal for Texas to be a major player in the global marketplace. But the future high-tech, globally competitive world will require very high skill levels, which many Texas workers do not possess. Texas must choose between a low-skills, low-wage economy based on service industries, or a high-technology economy requiring high skills and paying high wages.

[12] Texas Research League, "Narrowing the Skills Gap," ACHIEVE! (Newsletter), (Austin, Texas: Texas Research League, September 1992): p.6.

[13] Ibid.

[14] Texas Senate Committee on State Affairs, *A Quality Workforce: The Premier Chip in a High Stakes Game*, (Austin, Texas: Texas Senate, 1992.)

Texas' future prosperity will depend on increasing the availability of high-skilled jobs and improving the skill levels and education quality of all Texas youths–not just those bound for college.

Time and again, high-performance companies in the U.S. and abroad have found that vesting skilled front line workers with the authority to make decisions and suggest ways to improve company performance results in radical improvements in productivity. Improved productivity leads to more profits for the company, higher wages for employees, and a stronger overall economy. A high-performance, high-wage work environment rests on two main factors: companies which are willing to restructure their environment and hierarchy in order to vest workers with more decision-making authority, and highly skilled workers to fill those jobs and make the decisions.

Texas' future prosperity will depend on increasing the availability of high-skilled jobs and improving the skill levels and education quality of *all* Texas youths–not just those bound for college. Texas businesses and industries must adapt to the high-performance organization standards that are being adopted by other nations, and by American firms such as Xerox and Motorola. This new form of organization relies on complex technology that requires highly skilled operators. Decisions are made at lower levels of the company, requiring good decision-making skills from employees at all levels.

The skills necessary to survive in the new economy will include excellent literacy, mathematics, speaking, and listening abilities. Individuals will have to problem-solve in groups, communicate well, learn rapidly, analyze data and situations, make important decisions, and take responsibility for those decisions.

The Mismatch Between Education and Work

American youths often face employment problems because our education system does not adequately prepare them to enter the world of work. Students often do not see the relevance of classroom activities to their current or future lives, so they sometimes quit listening, stop studying, and drop out. Many youths discover that what they learned in school bears little similarity to what employers require of them. Few high school graduates or early school-leavers have the experience or skills necessary to land jobs that pay above minimum wage. And often young people have not learned the personal skills they need to succeed in the world of work: skills such as interpersonal communication, decision making, problem solving, responsibility, working well within groups, and self-discipline, among others.

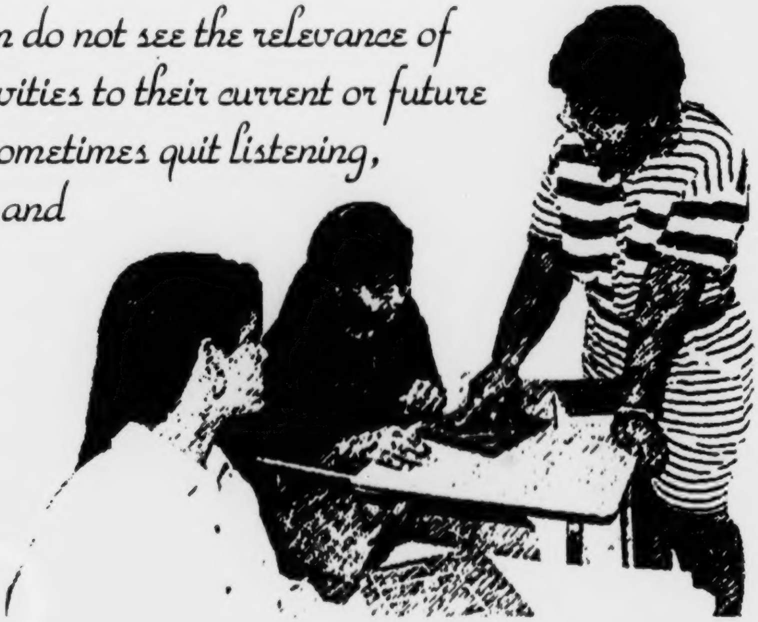
Not only are young people not taught skills they need to succeed in today's working world, they are also ill-informed about that world. According to a 1981 survey by the Educational Testing Service, about half of all high school students had never talked to a counselor about occupations. Only 6 percent of all high school counselors reported spending more than 30 percent of their time helping students find jobs.[15]

These factors, among others, prompted the Commission on the Skills of the American Workforce (1990) to say that "America may have the worst school-to-work transition system of any advanced industrial country. Students who know few adults to help them get their first job are left to sink or swim."[16]

[15] Glover and Tolo, et al., p.3.

[16] National Center on Education and the Economy, P.4

Students often do not see the relevance of classroom activities to their current or future lives, so they sometimes quit listening, stop studying, and drop out.



This system affects vast numbers of Americans: each year, about 1.4 million young people enter the labor market without going to college. This "forgotten half" is a vital segment of the American population, says the William T. Grant Foundation (1988):

> These are the young people who build our homes, drive our buses, fix our televisions, maintain and serve our offices, schools, hospitals, and keep the production lines of our mills and factories moving. To a great extent, they determine how well the American family, economy, and democracy function.[17]

In *Bridging the Gap: Implementing School-to-Work Transition in Austin,* a 1993 report by the Lyndon Baines Johnson School of Public Affairs at The University of Texas at Austin, Glover and Tolo, et al. point out that the occupations highlighted in the above quotation, while not requiring a college degree, comprise the majority of jobs in our economy. By the year 2000, 70 percent of all jobs will not require a college degree. However, the report states, these jobs *will* require significant learning beyond high school.[18]

Low Income and Ethnic Minority Youths Are Most Strongly Affected

The transition from school to work is especially difficult for ethnic minorities and/or low-income youths. In the working world, according to Glover and Tolo, et al., informal networks among people who know and trust each other often match jobs with job seekers. Employers frequently depend on word-of-mouth to fill positions. Middle-class parents are usually part of these informal job networks, and can help their children find employment. Many low-income parents, however, do not know people who can offer their children high-quality, good-paying jobs, say the researchers. The children of low-income parents face another problem, as well, say Glover and Tolo, et al.: these youths and potential employers often have powerful negative stereotypes about each other that seriously hamper the job-finding process.[19]

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[17] **William T. Grant Foundation Commission on Work, Family and Citizenship. *The Forgotten Half: Pathways to Success for America's Youth and Young Families.* (Washington, DC, William T. Grant Foundation, November 1988): p. 1.**

[18] Glover and Tolo, et al.

[19] Glover and Marshall, p. 593.

These factors combine to create a very disturbing employment picture for ethnic minority youths. In 1989 the U.S. Bureau of Labor Statistics explored the employment status of recent high school graduates. The Labor Department found that unemployment rates were 14.9 percent for whites, 29.1 percent for Hispanics, and 50.3 percent for African-Americans.[20] Ethnic minority dropouts fared even worse. In 1990, only 29 percent of African-American high school dropouts between the ages of 16 and 24 were working, compared with 57 percent of white dropouts.[21]

While ethnic minority youths may be unaware of these statistics, they are often brutally aware that they may face an uphill battle to secure a bright employment future.

Employers Often "Choose Against Youth"

Employers often complicate the difficulties facing young people. America's best employers–those offering good benefits, high salaries, and continued training–rarely hire young people who have just graduated from high school, even for entry-level positions. Yet these same employers are often very active in efforts to reform the public schools. According to Glover and Marshall (1993), these employers often delay hiring these youths until they enter their twenties and have "matured" and "settled down." In so doing, say the researchers, employers "choose *against* youth."[22]

Glover and Marshall (1993) say that this practice produces four disturbing consequences for students, employers and the nation:

1. The delay in hiring American youths provides German, Japanese, and other nations' youths a five- to ten-year head start in gaining access to significant occupational skills training.
2. By "choosing against youth," the best American employers are disengaged from the process of instructing and socializing their future workers.
3. The delay in hiring high school graduates eliminates a natural communications loop for employers to articulate to schools the skills needed in the workplace.
4. By disconnecting effort and achievement in school from rewards in the workplace, these hiring practices undermine student incentives to work hard and achieve in school.[23]

American Education and the "Taylorist" Economic Model

American education, business, and economy are closely linked. Since one function of public schools has traditionally been to empower young people with the tools they need

> "Here more than anywhere else, those who do not have and are not on their way to getting a baccalaureate degree–more than 70 percent of the population–are held in low regard, have little claim on the nation's goods and services, and are in no position to make the contribution at work of which they are capable. They are our single most valuable–and most wasted–resource."

Thinking for a Living: Education and the Wealth of Nations, Ray Marshall and Marc Tucker, p. xvii.

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[20] Ibid., p. 59

[21] Glover and Tolo, et al., p. 4.

[22] Glover and Marshall, p. 596.

[23] Ibid.

to function well in society, the needs of the workplace have been reflected in the methodology, philosophy, and organization of U.S. schools. For many years the American system of education adequately supported the nation's system of business and its requirements for workers. The economic system that influenced American education throughout most of the 1900s was based on mass production and a stratified hierarchy of "white collar" and "blue collar" workers. This system, named "Taylorism" after management theorist Frederick Winslow Taylor, developed in the early 1900s and was based on the needs of a mass manufacturing economy. It is still the organizational basis for most U.S. businesses.

> "The whole attitude of Taylor... was described by a mechanic who worked with him... Taylor would tell him that he was 'not supposed to think, there are other people paid for thinking around here.'"
>
> Quoted in Raymond E. Callahan, *Education and the Cult of Efficiency: A Studey of the Social Forces that Have Shaped the Administration of the Public Schools*

Under this scheme, a small number of managers directed a mass of low-skilled workers, who often toiled on assembly lines, doing simple, repetitive tasks that required few problem-solving abilities or decision-making skills. These workers produced goods largely for consumption by other Americans. In the first half of the century, workers with low skill levels usually found work easily in this economy. Schools, which train young people for life and, consequently, for employment, taught higher-order thinking skills only to youths they identified as "college bound," while virtually ignoring the needs of young people who did not plan to attend college. Many educators correctly assumed that youths with low skill levels stood a fair chance of finding meaningful employment and securing reasonably good futures, even without such basic skills as literacy. The select few who went to college usually became the "white collar" managers, while most students on the general track became the "blue collar" workers.[24]

Robert Reich, U.S. Secretary of Labor, paints a vivid analogy that links the education and mass production worlds of the mid 1900s:

> Children moved from grade to grade through a preplanned sequence of standard subjects, as if on factory conveyor belts. At each stage, certain facts were poured into their heads. Children with the greatest capacity to absorb the facts . . . were placed on a rapid track through the sequence; those with the least capacity for fact retention . . . on the slowest. Most children ended up on a conveyor belt of medium speed. Standardized tests were routinely administered at certain checkpoints in order to measure how many of the facts had stuck in the small heads, and "product defects" were taken off the line and returned for retooling. As in the mass-production system, discipline and order were emphasized above all else.[25]

This stratified, regimental system undoubtedly discriminated against low-income and ethnic minority students. From an economic standpoint, however, it was highly effective for its time: manufacturing based on "white collar" and "blue collar" workers was largely responsible for America becoming a preeminent world power in the first half of the 20th century. However, the system began losing its effectiveness in the 1970s, with the advent of complex technology and global competition.

Technological Change Jeopardized Low-Skilled Workers

Three innovations led to changes in the Taylorist economy: increased international competition; shorter product life cycles; and rapid innovations in the production process, technology, and organizational procedures.[26] Low-skill manufacturing jobs which paid good wages began disappearing as machines or computers were invented which could

[24] Texas Literacy Council, *Developing Human Capital*, (Austin, Texas: Texas Literacy Council, 1991).

[25] Robert B. Reich, *The Work of Nations*, (New York: Vintage Books, a Division of Random House, 1991): p. 59.

[26] James E. Rosenbaum, David Stern, Mary Agnes and Stephen F. Hamilton, Sue E. Berryman, and Richard Kazis, *Youth Apprenticeship in America: Guidelines for Building an Effective System*, (Washington DC: William T. Grant Foundation, 1992).

perform tasks formerly assigned to low-skilled workers. Employees often found that keeping their jobs depended on the ability to operate complex equipment. Americans began purchasing more products made in other countries and buying fewer U.S.-made products. International competition ate into company profits, and lower profits sometimes meant that workers were laid off. Many companies found that they could move operations overseas and pay lower wages, so more American jobs were lost.

Laid-off workers sometimes had trouble finding new jobs. Employers demanded higher skill levels in new employees; for example, the ability to operate computers. Thus, employment opportunities decreased for individuals who had not been trained in new skills. Unemployment increased as more and more people found themselves out of work because their limited skills were no longer good enough, or because their employer moved operations to a country where it could pay lower wages.

A Changing Economy and Work Force Preparation

Today the nature of the American and worldwide economies is still changing. While *mass production* drove the Taylorist economy of the early 1900s, technological advances and global competition are creating an economy based on *information* and *human resources*.

A mass production economy focuses on *quantity*. Firms make profits by selling more products than their competitors sell, and usually for a lower price. Decision-making responsibility lies in the hands of a few managers. An information economy, on the other hand, is based on *quality*. Businesses profit by being more responsive to the needs of customers, offering a high-quality product, and delivering it faster than the competition. In an information economy, individual workers have more responsibility and flexibility in making decisions. While the mass production workplace is based on low skills and low wages, the workplace in an information economy is based on high skills, good wages, high performance, and the abilities to learn quickly, generate new ideas, and adapt readily to change. In an information economy, says Shoshana Zuboff of the Harvard Business School, "learning is the new form of labor."[27]

Kazis (1993) describes the needs of an information-based workplace this way: "High performance work organizations require workers at all levels of the firm who can analyze data, communicate clearly, learn rapidly, participate in managerial decisions, and work well in teams."[28]

The majority of U.S. businesses are still structured around Taylorist and mass production models. This means that they try to sell their products for less than similar products which are made in other countries, often by workers who earn less than U.S. workers. Products that cost less to make can be sold for less money, at a higher volume, and for more profit. The U.S., which pays a minimum wage of $4.25 per hour, is trying to compete with goods produced in countries which may pay their workers $1.00 per *day*. That is why many American firms move their manufacturing operations to other countries.

> "We have been asking schools to prepare students—all students—for demanding, fast-changing jobs of the future with rigid structures and teaching methods designed for the factories of the early industrial age. We have been asking a nineteenth-century institution to educate people for life in the twenty-first century."
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> *Smart Schools, Smart Kids*, Edward B. Fiske, 1991, p.25.

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[27] Edward B. Fiske, *Smart Schools, Smart Kids: Why Do Some Schools Work?* (New York: Touchstone, a division of Simon and Schuster, 1991), p. 21.

[28] Kazis, p.4

If the U.S. and Texas want to compete in the future global economy, they must adopt approaches that require high worker skills and performance. These new approaches will require changes in both education and business practices.

Education Has Not Adjusted to the Changing World

These drastic changes bearing down on the world, U.S., and Texas economies have had very little impact on what students learn in school or how they are taught. Society still tends to concentrate efforts on young people it perceives to be "college-bound" while accepting low performance and skills in the "forgotten half." This emphasis on youths who plan to attend college is mirrored in monetary priorities for education. According to the U.S. General Accounting Office (GAO) (1990), the U.S. invests about $20,000 in each college youth, and about $9,000 in each noncollege youth. (Most of that $9,000 expenditure covers high school costs.)[29] Says the GAO, "If we exclude high school expenditures to examine investment in education and training only after departure from high school, the disparity is much larger. The average public expenditure for college youths is *more than seven times larger than the average post-high school investment for the noncollege population* (italics added)."[30]

Monetary priorities tend to mirror the value a society places on what is being funded. Because U.S. learning systems still concentrate efforts and money on youths who attend college, rather than striving to ensure high skill levels in all its population, America is at a potentially serious disadvantage in the new competitive global economy.

Education, which prepares young people for life outside school, must seek ways to instill *all* young people—not just college youths or youths who appear to be headed for college—with the skills they need to live successfully in a more complex world. In order to instill these skills, American society must raise expectations for *all* students, especially the "forgotten half."

Low Expectations Lead to Low Performance and Low Skills

In essence, the Taylorist system discouraged America from developing the skills and intellectual abilities of most Americans. The Taylorist system was based on the concept that a few "gifted" students would become leaders in industry and life. Other students were not expected to perform up to these standards. They were not thought to have the "natural ability" of the "gifted few," and thus it was assumed that they could not achieve the same high standards. So students labeled "poor" or "average" were often assigned to undemanding, inescapable tracks that led to the low-skill assembly line jobs that were the foundation of the economic system. Students who were members of minority groups were often automatically labeled "poor" or "average."

The expectation that not all students have the "natural ability" to achieve equally is often mirrored today in the U.S. educational system. American educators sometimes assume that not all students are capable of high achievement. The report *America's Choice: High Skills or Low Wages!* (1990) put the concept this way:

> More than any other country in the world, the U.S. believes that natural ability, rather than effort, explains achievement. The tragedy is that we communicate to millions of students every year, especially to low-income and minority students, that we do not believe that they have what it takes to learn. They then live up to our expectations[31]

High expectations help promote better achievement. The first step toward helping young people attain high skills is to hold high expectations for them. In order for America to secure its place in the high-skills world, it must promote better achievement in *all* its population.

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[29] U.S. General Accounting Office, *Training Strategies: Preparing Noncollege Youth for Employment in the U.S.*, (Washington, DC: U.S. GAO, 1990): p.23.

[30] Ibid., p. 24.

[31] National Center on Education and the Economy, *America's Choice: High Skills or Low Wages!*, (Rochester, New York: Commission on the Skills of the American Work Force, 1990): p.3.

Is Business Satisfied with Low Skills and Low Wages?

Schools may be slow in encouraging all students to attain high skills in part because American business has not yet felt sufficient pressure to move away from a low-skill environment. Most businesses are comfortable with traditional structure, and are unwilling to spend the vast sums necessary to upgrade workplaces into high-skill, high-performance organizations. While trends indicate that the future global marketplace will demand a high-skill environment, the reality is that many American firms function reasonably well today with low-skilled workers. While some U.S. companies have shifted from a Taylorist form of organization to a high-performance, information-based work organization, most have not. They compete in the world market not by ensuring a highly-skilled work force, but by paying low wages to a relatively low-skilled work force.[32]

A low-wage strategy has serious implications. If it continues, wages generally become lower and more unequal, greater economic stratification of society results, and the general economy performs poorly. High wages, on the other hand, are a boon to the overall economy. In order for America–and Texas–to compete in a global economy, both business and education must adopt high-skill approaches. Schools will have little incentive to train students in high skills if business does not actively seek and hire skilled young people for high-skilled jobs. And the hard fact is that high-skilled jobs are not very abundant.

The Chicken or the Egg: Is There a "Skills Shortage"?

In the March 8, 1993 issue of *Business Week* magazine, Robert Kuttner called the scarcity of high-skills jobs in America a "dirty secret." Kuttner wrote: "Executives bemoan the poor quality of applicants for $5- and $6-an-hour jobs, but when they offer jobs that pay $12 an hour . . . qualified applicants line up at dawn. *In circles where experts earnestly call for additional highly skilled workers, the dirty little secret is the scarcity of jobs that require more advanced skills* (italics added)."[33]

A 1992 article in *Phi Delta Kappan* by Jonathan Weisman further questions the "skill shortage." Many recent college graduates have discovered this shortage the hard way, says Weisman. "About one-fifth of college graduates were stuck in jobs that did not call for the skills and education they attained in college," says Weisman, "a sign not of a *skills* shortage but of a shortage of *jobs* that require skilled workers."[34]

In a 1991 survey of U.S. businesses by Louis Harris and Associates, no more than 25 percent of the 402 companies responding had made "major changes" in the way they have adapted business practices to take advantage of the higher caliber of recent graduates.[35]

The "skills shortage" dilemma adds a new twist to the old riddle, "which came first, the chicken or the egg?" Until high-skills jobs are abundant, employers will not require huge quantities of highly skilled workers. But if highly skilled workers are not available, businesses will have little incentive to upgrade their technology and operations to world-class levels.

Says Stern (1990, quoted in Kazis, 1993), "The problem is not a short supply of skills for the kinds of jobs that presently exist, but scarcity of skills required in the kinds of jobs *that will have to be created* if the nation's economy is to regain its competitive edge."[36]

Says *Business Week*, "improving the schools and reforming job training are . . . relatively easy. The hard part is improving the kinds of jobs that the economy offers."[37]

High-Skills Jobs Are Increasing

Now for some good news: while most American businesses have not yet become high-performance, high-skill work organizations, high skills jobs are steadily increasing, and will probably continue to do so. According to a report by the William T. Grant Foundation,

[32] *America's Choice: High Skills or Low Wages*, 1990.

[33] Robert Kuttner, "Training Programs Alone Can't Produce $20-an-Hour Workers," *Business Week*, March 8, 1993, p. 8.

[34] Jonathan Weisman, "Skills in the Schools: Now It's Business' Turn," *Phi Delta Kappan*, November/December 1992, pp. 367-369.

[35] Louis Harris and Associates, Inc., *An Assessment of American Education: The View of Employers, Higher Educators, the Public, Recent Students, and Their Parents*, (New York: Louis Harris and Associates Information Services, September 1991).

[36] Kazis, p. 4.

[37] Kuttner, p. 8.

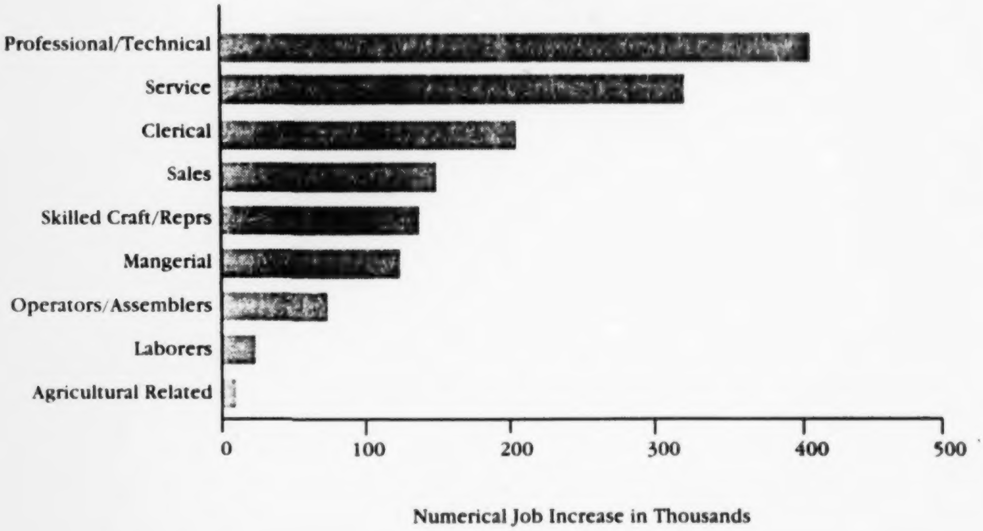

Figure 2
Employment Change
By Major Occupational Divisions
1989 - 2000

Source: Texas Employment Commission

higher-skill occupations have grown at almost two-and-one-half times the rate of lower skill jobs between 1975 and 1990. In 1990, higher-skill occupations accounted for only 38 percent of total U.S. employment; however, they grew by 65 percent during the 15-year period, and accounted for 44 percent of the total net job growth.[38]

High-skill jobs are increasing in Texas, according to the Texas Employment Commission (TEC). The TEC projects that one in five jobs created during the 1990s will be in the professional, paraprofessional, and technical categories–areas requiring high skill levels (see Figure 2). These professions will account for one in five Texas jobs by the year 2000. Professional and technical areas will gain 410,400 jobs by the year 2000, says the TEC–a growth rate of 28 percent. Jobs for computer specialists will show a 43 percent increase due to more automation in homes and businesses. Educational and health occupations will experience the largest growth, accounting for 57 percent of the growth in professional and technical occupations. Educational occupations will grow by 28.4 percent, a gain of 120,050 jobs. Health-related fields, says the TEC, will experience a growth rate of 39.4 percent, a gain of 112,100 jobs.[39]

The Bureau of Labor Statistics expects this trend in high-skill job growth to continue. Between 1990 and 2005, higher-skill occupations are expected to grow twice as fast as lower-skill occupations. These new jobs will provide a significant share of the job growth expected in the 21st century.[40] However, it is still too early to tell if the demand for higher workplace skills will occur only in certain industries or within companies with certain characteristics.[41]

[38] Rosenbaum et al., p. 2.

[39] Texas Employment Commission. *Industry and Occupational Projections to the Year 2000*, (Austin, Texas: Texas Employment Commission, 1992).

[40] Rosenbaum et al., p. 2.

[41] Ibid., p. 2.

Education Responds

Educators, recognizing the complexities of students' future working lives, are calling for closer integration of employment and academic skills. In 1991 the Council of Chief State School Officers (CCSSO) made connecting school and employment their top research and policy priority. The intent of this connection "is to improve education and experiences that bridge youth and adulthood and prepare American youths for immediate or eventual productive employed careers."[42] CCSSO said that schools must view preparation of young people for employment as part of their primary responsibility.

The council called for several changes in the structure of education. They suggested quality primary and secondary education that includes an early orientation to work, curriculum that integrates classroom learning with workplace experience, and expansion of programs which introduce the skills and work orientations youths will need in their adult years.

The programs advocated by CCSSO include cooperative education, technical preparation (Tech-Prep), youth apprenticeship, mentoring, and service learning. The new structures and programs, they said, "should particularly support the development of skills for strategic occupations–those which are internationally competitive. . . These changes should result in higher levels of meaningful participation of *all* youth–particularly young women, minorities, youth from low-income families, those with limited English proficiency, and those with disabilities."[43]

The council made the following recommendations for connecting school and employment:

- Schools must view preparation of youths for employment as part of their primary responsibility.
- Every student should participate in a program that guarantees access to postsecondary education, training and employment.
- Employers and employee organizations must assume new responsibilities for the development of youths and the institutional changes that support the growth and maintenance of a highly skilled work force.
- Schools must integrate theoretical and practical knowledge into the curriculum. Methods, materials, and strategies must support this integration.
- New and substantive alliances must be formed among schools, higher education, business, employee organizations, and social service agencies to prepare youths for successful employment options.
- Pathways to continued education and employment must be diverse, flexible, recognized by all stakeholders, and accessible to ensure wide student participation.
- A national framework or structure of standards for employability skills should be developed.
- The essential purpose of assessments of work force readiness is to improve student performance.
- Changes in how we prepare students for the workplace must be considered within the broader context of an economic policy for national and individual development and a social vision about the place of employment in people's lives and society.

CCSSO suggested that a good place to start in making these extensive changes is to ask, "what knowledge and skills will students need to be successful adults and workers in the 1990s and early 21st century?"[44]

[42] Council of Chief State School Officers. ***Connecting School and Employment***. (Washington. DC: Council of Chief State School Officers. 1991. Unpaginated)

[43] Ibid.

[44] Council of Chief School Officers. ***State Initiatives for School and the Workplace***. (Washington. DC: Council of State School Officers. 1991): p. 21.

> *Because this country continues to operate on the premise that, for the country to be successful, only a few need to know or be able to do very much, we are poised on the precipice of a steep decline in national income, with all that this implies for our material well-being and the stability of our society.*
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> *Thinking for a Living: Education and the Wealth of Nations,*
> Ray Marshall and Marc Tucker, p. xxiii.

What Skills Will Students Need?

The U.S. General Accounting Office (1990) foresees an overall increase in specific skill requirements: "While many low-skill occupations will continue to employ many people (over the next decade), their skill requirements are expected to increase . . . . Skills increasingly needed to perform many jobs include the ability to connect practice and theory; identify problems; and then analyze, test, and troubleshoot."[45]

The skill requirements outlined by the General Accounting Office closely parallel those suggested by the U.S. Secretary of Labor, Robert Reich. Reich says that higher-thinking skills will be increasingly required, especially among a class of highly skilled workers Reich calls "symbolic analysts." Symbolic analysts account for about one in five workers today. Among this class of workers are research scientists, engineers, investment bankers, lawyers, a variety of consultants, advertising executives, public relations executives, and many persons in creative and performing fields. The skills needed by symbolic analysts are the very skills which will be required in future high-skill occupations. These skills, according to Reich, include ***abstraction, system thinking, experimentation,*** and *collaboration*. In his 1991 book, *The Work of Nations,* Reich explains these skills and examines how schools can impart them.

Abstraction, Reich says, is the ability to uncover patterns and meanings so that information can be manipulated in new ways, as when an engineer designs a new computer circuit or a writer finds a new way to explore human relationships. Frequently classroom material is prepackaged in textbooks, standard curriculum, and classroom lectures. In order to develop the skill of abstraction, classroom emphasis has to shift away from simply delivering information and expecting students to memorize it. The emphasis should be on judgment and interpretation. "The student is taught to get *behind* the data," Reich says, "to ask why certain facts have been selected, why they are assumed to be important, how they were deduced, and how they might be contradicted."[46]

System thinking is the ability to see reality as a system of causes and consequences, and understand how these are related. For example, what appears to be a simple problem—say, a fan belt which continually slips—may be a symptom of a larger mechanical problem, which may rear its head in other forms. If the larger problem can be discerned and corrected, the lesser problems will not occur. In a classroom which teaches students to be system thinkers, students are not merely taught to solve a problem; they are taught to look at how the problem arises and how it is connected to other problems. Learning to read a map to get from one place to another is one thing, but learning to read the terrain in order to find a workable shortcut is quite another.

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[45] U.S. General Accounting Office, *Training Strategies: Preparing Noncollege Youth for Employment in the U.S.*, (Washington, DC: U.S. GAO, 1990)

[46] Reich, p. 230.

Experimentation takes system thinking one step further. It involves trial and error, and ultimately yields new ways of doing things. Experimentation is crucial in this rapidly changing world, says Reich. It yields countless innovations, such as problem-solving techniques and creative marketing approaches. Students who learn to experiment take system thinking one step further: after learning to read the terrain and locate possible shortcuts, they *try* those shortcuts to see if they actually work.

Collaboration is the ability to work with others, communicate concepts, and achieve a consensus. In this complex world with its wealth of information and new techniques, teamwork is often the best way to uncover problems and discover solutions, according to Reich. Many problems in business today are not solved by individuals, but rather by groups. The Motorola corporation, which has one of the most comprehensive worker training programs in America, finds it necessary to train employees in communication and cooperation because most do not learn these skills in school. Motorola's chief liaison to schools and universities, Edward Bales, says this of Motorola's training efforts: "We teach collaborative problem-solving. In school that's called cheating."[47]

Many classrooms emphasize individual, solitary performance at the expense of group learning. Students are not allowed to talk, pass notes, or help each other solve problems. Classes often stress individual achievement and competition. However, when classrooms focus on collaboration and group learning, students learn to identify problems and communicate them to each other. They learn, Reich says, "how to seek and accept criticism from peers, solicit help, and give credit to others. They also learn to negotiate–to explain their own needs, to discern what others need and view things from others' perspectives, and to discover mutually beneficial resolutions."[48]

> *"Improving the schools and reforming job training are . . . relativey easy. The hard part is improving the kinds of jobs that the economy offers."*
>
> *Business Week*, March 8, 1993

[47] Ronald Henkoff, "Companies That Train Best," *Fortune*, March 22, 1993, p. 63.

[48] Reich, p. 233.

The Secretary's Commission on Achieving Necessary Skills (SCANS)

Many of the skills suggested by the U.S. Department of Labor and Robert Reich are restated in the recommendations of the Secretary's Commission on Achieving Necessary Skills (SCANS), which are receiving widespread support from both the education and business communities. The commission was asked by the U.S. Secretary of Labor to make recommendations on what students need to learn in order to empower America as an effective international competitor.

The commission suggested three general foundation skills:

- **Basic skills**, including reading, writing, mathematics, listening and speaking;
- **Thinking skills**, such as creative thinking, decision making, problem solving, the ability to visualize, knowing how to learn, and reasoning ability; and
- **Personal qualities,** such as responsibility, self-esteem, sociability, self-management, integrity, and honesty.

The commission identified five "competencies" that interact with foundation skills. Competencies are basic work skills employees must possess to succeed in the workplace. The five SCANS competencies are the abilities to:

- identify, organize, plan, and allocate resources;
- work with others;
- acquire and use information;
- understand and work effectively within complex interrelationships; and
- work with a variety of technologies.

The commission recommended that schools integrate these competencies into academic situations as often as possible. "Integration" does not mean creating a separate course, such as "SCANS 101." Rather, integration requires sound teaching practices which introduce workplace skills into classroom instruction and projects. Steffen Palko, a member of the SCANS commission and trustee for the Fort Worth ISD school board, describes the SCANS skills integration process this way: "Imparting SCANS skills is not so much about curriculum as pedagogy: How instruction is delivered as opposed to what specifically is taught."[49]

Chapter 4 of this document examines SCANS skills and competencies in greater detail. Chapter 8 looks at how schools are incorporating SCANS elements into classroom activities.

Integrating Academic and Work Skills Benefits Students

Experts also call for other methods of combining career and academic elements in the classroom. Efforts to integrate elements from vocational and academic education are especially important. The National School Boards Association and the National Association of State Boards of Education has issued a policy statement supporting integration of vocational and academic education:

> Integration of vocational and academic education can improve both teaching and learning, address problems in our new global economy, and lead to equal opportunity for all students. Vocational education can be used to make academic education more concrete and understandable, and academic education can be used to point out the vocational implications of all education. The process of integrating studies allows students to take the curriculum pieces of the educational puzzle and put them together to see the "big picture."[50]

When workplace skills are integrated into classroom lessons, students who previously had little use for school may suddenly see the relevance of education to their present and future lives. Classroom learning takes on more importance. Educators involved with the programs report that learners tend to be more interested in lessons, learn more, stay in school and graduate.

[49] Steffan Palco, Address to the Committee on Student Learning, Texas Education Agency.

[50] Gail Clark, ***Blueprint for Integration of Academic and Vocational Education***,(Commerce, Texas: Educational Development and Training Center, East Texas State University, in cooperation with the Texas Education Agency, 1992): p. 37.

"The evidence is conclusive . . . that one's ultimate work performance will be profoundly affected by prenatal and pre-school development and the influence of home and family." Center for Social Policy Studies, George Washington University

The Educational Development and Training Center (EDTC) at East Texas State University is assisting 13 Texas pilot schools with vocational/academic integration programs. EDTC (1992) states that integration of academic and vocational education serves two purposes:

> (1) it is a method for preparing noncollege-bound students for life and jobs in a changing world, and (2) it is a method of giving college-bound students hands-on experiences for relevant applications of academic learning to prepare for jobs in a changing world. Integration of vocational and academic education, with input from business and industry, can restructure schooling for all children.[51]

The integration of workplace or vocational skills into classroom activities has immediate benefits for students. Certainly they are better prepared for life outside school. But another benefit is readily apparent: when workplace skills are integrated into classroom lessons, students who previously had little use for school may suddenly see the relevance of education to their present and future lives. Classroom learning takes on more importance. Educators involved with the programs report that learners tend to be more interested in lessons, learn more, stay in school, and graduate.

Improved Guidance and Career Counseling

An increased emphasis on workplace skills will also demand improved guidance and career counseling for students. Schools and counselors must help equip students with the skills they need for the work force, and more: schools and counselors must also help students acquire the skills they need for life in an increasingly intricate world. Guidance services must improve efforts to help students learn who they are, decide what role they want to play in adult life, and help equip them with the emotional resources to deal with a rapidly changing environment.

These efforts should not be delayed until middle or high school. Students should begin learning about career possibilities in the elementary grades, if not earlier. Some of America's international competitors begin orienting their children to their future working lives at a very early age. Sweden, for example, begins exposing young people to careers at age seven. Each year, Swedish youths spend at least one week in various workplaces, including parents' job sites, to learn about various career options. Employers visit schools, explain their industries, and describe career options available within each industry.

Lifelong Learning

Much has been said about high skills, why they are needed, why they should be incorporated into classrooms, and why improved guidance and career counseling services are needed. But preparing young people for life in a skilled work force does not begin with kindergarten and end with high school or college. In order to ensure high skills and keep up with a rapidly changing environment, individuals must be lifetime learners. While American society has traditionally focused on educating young people, the needs of adult workers, preschoolers, and infants have often been neglected. It is also as important to ensure that children enter school ready to learn as it is to make sure that they leave school equipped with the skills to lead successful lives. It is just as important to retrain adults in high skills or to upgrade existing skills as it is to ensure that students leaving high school acquire these skills. High technology is rapidly changing the environment in which Americans live and work. These changes require ever-increasing skill levels and adaptability to shifting workplace conditions.

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[51] Educational Development and Training Center, p. 38

It is also becoming increasingly clear that the experiences children have in their early years affect their future lives, both educationally and in the workplace. Researchers at the Center for Social Policy Studies at George Washington University (1992) say this:

> The evidence is conclusive . . . that one's ultimate work performance will be profoundly affected by prenatal and pre-school development and the influence of home and family. More important than the acquisition of specific skills at this age is the development of self-preserving attitudes and values such as a sense of achievement and self-esteem, positive work values, pride in one's own efforts and accomplishments, curiosity and creativity mixed with self-discipline, and a willingness to accept positive direction from others.[52]

Education and work force preparation, then, begin at home. Parents instill in their children the motivation and values that they will carry into their adult lives. The Center for Social Policy Studies at George Washington University (1992) suggests that "Just as prenatal care augments birth rates and birth weights and improves children's physical and mental capacities throughout life, parental attitude toward work is early indoctrinated in the child with life-long career impact."[53]

The Center says that curriculum should be developed to introduce parents to these concepts, and parents should be encouraged to participate. Recipients of Aid to Families with Dependent Children, mothers with children in the Women, Infants and Children nutrition program, and Head Start parents, says the Center, could be introduced to such concepts as a requirement for program participation.[54]

Learning begins in the womb and continues through childhood, adolescence, and adulthood. People do not stop learning when they drop out of school or receive a doctoral degree. Learning is a lifelong process. The rapidly changing high-skills environment of the future will require workers who are also active learners.

Glover and Tolo et al. (1993) recommend active work-based learning programs:

> In the modern global information economy, few people will obtain a good job that pays well without significant learning beyond high school. Although many will achieve this learning through postsecondary schooling, what America especially needs is the development of lifelong work-based learning that emphasizes integration of academic and applied learning.[55]

President Clinton addressed lifelong learning in a February 17, 1993, speech to a joint session of Congress: "Lifelong learning will benefit workers throughout their careers. We must create a new unified worker training system, so that workers receive training regardless of why they lost their jobs."[56] Our international competitors–nations like Japan and Germany–already have unified training systems.

"The consequences of becoming a learning society are enormous, for it means that for the first time schools have been given the job of producing the capital on which the country depends."

Smart Schools, Smart Kids, Edward B. Fiske, 1991, p. 21.

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[52] Sar A. Levitan; Garth L. Mangum; Stephen L. Mangum. *A Training Program for the 1990s: Reflecting on Campaign Proposals*. (Washington, D.C.: Center for Social Policy Studies, The George Washington University, 1992): p. 14.

[53] Ibid., p. 14.

[54] Ibid.

[55] Glover and Tolo, et al., p. 11.

[56] "Text of President's Address to a Joint Session of Congress," *New York Times*, February 18, 1993, p. A14.

Meeting the Challenge

Important issues face American education and business, but the landscape is hardly a wasteland. American colleges and universities are acknowledged as the best in the world. U.S. secondary schools often do an excellent job in preparing young people to enter colleges and universities. Now educators need to concentrate just as hard on work skills preparation for youths who do not plan to attend college.

Much progress has already been made in smoothing youths' transition from school to work. Seeds have been planted that can take root and flower into productive, enriching opportunities for youths and adults. Schools and businesses are developing many programs and projects which ease youths' transition from school to to the real world. Many of these efforts benefit adults as well. Examples of these efforts include alternative programs for those students who were not well served by traditional education, cooperative education, Tech-Prep, career academies, school/business partnerships, programs funded under the Job Training Partnership Act, and apprenticeships. These options will be explored later in this document.

Efforts are underway at national and state levels to develop policies, programs, and other initiatives which help smooth the way for young people entering the world of work. Among these are national and state initiatives and legislation, and recommendations from the Secretary's Commission on Achieving Necessary Skills (SCANS), which will all be examined later in this document.

Many of these programs and initiatives are based on the practices of America's global economic competitors. How do the job training systems in other countries differ from those of the United States? The next chapter explores some of those techniques.

Chapter 2

How Do Other Countries Educate Their People?

Before the U.S. can compete effectively in the global market, it must know what its competitors are doing, and how they are doing it. America's chief competitor nations already build highly skilled work forces through educational systems which ensure that youths are prepared for the world of work. While these systems are certainly not perfect, they may offer elements which can be adapted to American culture to build more effective school-to-work transition systems. This chapter examines the practices in five of America's economic competitors: Sweden, Denmark, England, Germany, and Japan.

Many U.S. practices are undoubtedly superior to practices in these countries. Our collegiate education system, for example, is widely regarded as the best in the world. But just as other countries can learn from us, we can also learn a great deal from them. This chapter is not intended to imply that American education is somehow inferior to education offered in other countries. Rather, it is meant to offer examples of how other nations have developed highly skilled work forces.

When reading the descriptions of other practices, readers should keep in mind that cultural differences between the United States and our competitor nations often lead to practices that American society may find unacceptable. For example, concepts of equity and fairness may be different within the context of other cultural traditions.

> *"America must leave the routine work of the world to others. We must become a nation that thinks for a living. We must become smarter than the rest of the world."*
>
> Marc Tucker, president of the
> National Center on Education and the Economy

American concepts of tracking, among other things, may be challenged by practices in other countries, such as Japan. Readers should consider the "bigger picture" of how youth are prepared to assume responsible positions in society, and ask themselves if, and how, these practices might be adapted to improve U.S. work force development processes.

What Do Competitor Nations' Practices Have in Common?

In its 1990 report, *Training Strategies: Preparing Noncollege Youth for Employment in the U.S. and Foreign Countries,* the United States General Accounting Office (GAO) found that the employment training practices of America's competitor nations have four main things in common. These aspects often contrast with American practices, says the GAO:[1]

1. **Schools in competitor nations emphasize student effort rather than ability.** All students are expected to attain the academic skills necessary to succeed in postsecondary education or the workplace. Schools do not accept that some students will lag behind, and all students are pushed to high levels of achievement. Some U.S. schools, confronted with difficult social ills, often accept that many will lag behind.

2. **Schools and business communities in competitor nations guide students' transition from school to work to a greater degree than in the United States.** Curricula include an orientation to the world of work, often beginning in the early grades. Students who do not attend college receive intensive job placement assistance from schools or outside agencies. Employers often provide extensive input into the education process, and assume much of the responsibility for training their employees.

3. **Competitor nations establish competency-based national training standards that they use to certify skill competency in a career area.** In England and Germany, for example, students receive a certificate of competency when they demonstrate mastery of skills required by employers. The common U.S. practice is to certify only training program completion, not skill levels.

4. **Governments in competitor nations invest extensively in remedial education, training, or job placement for jobless out-of-school youths.** Sweden guarantees education, training, or work to every jobless teenager who has left school. England guarantees every jobless 16- and 17-year-old out-of-school youth up to two years of work experience and training.[2] U.S. employment and training programs reach only a modest proportion of the youth in need of them. For example, the primary U.S. job training legislation, the Job Training Partnership Act, primarily targets low-income persons who are in need of job training or retraining. Title IIA of the act targets youth. The GAO estimates that Title IIA programs reach only about 5 percent of eligible youth.[3]

Glover and Tolo, et al. (1993) identify six common elements in the education systems of Japan and Germany, America's chief economic competitors:[4]

1. **Youths in both systems know that effort and achievement in school are clearly and unmistakably needed to qualify for high-quality training and jobs after high school.** More important, such effort and achievement pay off in labor market rewards directly and immediately. In Japan, for example, the students who achieve the highest academically are rewarded with the best jobs. In Germany, apprenticeship trainers seriously consider an applicant's academic success when choosing among candidates for apprenticeships.

2. **Society has high expectations for the standards that all youth need to master in school.** Youths are required to meet high academic standards for graduation from secondary schools. Say the researchers, "almost all our major competitors provide better academic preparation to a *higher proportion* of their students (italics added)."[5]

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[1] U.S. General Accounting Office, *Training Strategies: Preparing Noncollege Youth for Employment in the U.S.*, (Washington, DC: General Accounting Office, 1990): p. 3.

[2] Ibid., p. 39.

[3] Ibid., p. 29.

[4] Robert W. Glover and Kenneth W. Tolo, et al., *Bridging the Gap: Implementing School-to-Work Transition in Austin*, (Austin, Texas: LBJ School of Public Affairs, The University of Texas at Austin, 1993): pp. 8-9.

[5] Glover and Tolo, et al., p. 9.

3. **Employers make early connections with youths, hiring them in their teenage years.** German employers begin training apprentices at about age 16, and hire 90 percent of the youths after training is complete.

4. **The process of preparing adolescents for the workplace is viewed as a joint responsibility of schools and firms.** Business and industry take on a huge share of the responsibility for training workers.

5. **Experiential learning systems for youths on the job are well-developed.** Firms invest in expert trainers and a well-designed training curriculum.

6. **Industry takes major responsibility for assessing and certifying the skills of youths.** This keeps firms in touch with the types and levels of skills that youths are learning.

Additionally, Germany, Japan, England, Sweden, and Denmark all have national policies to ensure effective training for youths who do not attend college. Indeed, Germany states this policy in its constitution. The United States has fragmented policies, but no central, systematic framework to ensure that *all* young people are adequately prepared to enter the work force. For example, the Job Training Partnership Act primarily targets low-income persons. Until recently, the U.S. has had no policy to ensure that *all* youths, regardless of economic status, have access to high-quality career preparation. Fortunately, the U.S. is making progress toward developing a systemic process with the *School-to-Work Opportunities Act of 1993*, which was designed to begin the creation of a nationwide framework (see Chapter 4).

The following sections take a more in-depth look at how Sweden, Denmark, England, Germany, and Japan structure their education and work force training systems.

Sweden

Swedish schools do not administer standardized tests until students reach age 14, and avoid tracking and ability grouping in the early grades. Students do not receive grades in elementary school, because educators believe that grades can damage a student's motivation and self esteem. However, grades are given in Grades 8 and 9.

> *"In Germany, Denmark and Sweden, many sectors of the population feel a collective responsibility to prepare youth for employment in the national interest and as a service to the next generation."*
>
> *European Lessons from School and the Workplace*, Council of Chief State School Officers, p. 6.

Sweden begins providing work orientation when students are 7 years old. All students spend from one to several weeks each year in workplaces, including their parents' places of employment. Employers visit schools to explain their business, and describe career options that are available in that industry. Between ages 7-15, students receive 6 to 10 weeks of work orientation. In the first two years of high school, students interested in vocational fields spend 10 percent of their time at a work site. Swedish schools take responsibility for vocational training. The system provides one year of vocational training, after which students seek out training firms and receive a combination of site-based and classroom training. Students are usually not trained in apprenticeships, which are generally limited to skilled construction trades. Most young people find jobs through contacts they make through work experience or family members.

> *Sweden begins providing work orientation when students are 7 years old.*

Sweden guarantees employment and training to all jobless teenagers who are not attending school. Programs vary depending on the age of the youths being served. Youths age 16-17 are expected to be permanently employed or in a training program, and are given assistance in returning to school or getting a job. Youths age 18-19 are referred to the local employment service. Youths are given seven weeks of job search support, and receive financial stipends the last four weeks if they are unable to find employment. Those who cannot find work are guaranteed a six-month full-time job with private employers.

Learning continues long after a person becomes fully employed. In a recent survey, over one-half of Swedish professional and white collar workers and over two-fifths of unskilled workers said they had participated in some form of education during the preceding year.[6]

Denmark

Danish students receive seven years of academic training, including Danish language arts and literature, science, art, athletics, foreign languages, and Christian studies. Tracking by academic ability is virtually nonexistent. Only about 2 percent of the student population are enrolled in special education classes. About 13 percent receive additional academic assistance to supplement regular instruction. Students progress at their own pace, and schools do not give annual examinations. While parents and students are kept apprised of students' progress, numerical grading is prohibited by law in Grades 1-7. Students are automatically promoted from grade to grade.

Tracking by academic ability is virtually nonexistent.

In the eighth and ninth grade, students get one week of work experience with an employer. The placements are organized by each community, often with input from parents. In the fall of the ninth grade, counselors from technical and commercial schools meet with students and parents and introduce students to possible occupations. The Ministry of Education sponsors programs which enable students to spend two weeks in a technical program by the end of the ninth grade. Students are expected to make a decision about whether to pursue postsecondary education or training by the end of their ninth grade year. This decision need not be permanent, however: students can change their occupational focus if they want to.

Compulsory education ends in the ninth year, or sometimes after a voluntary tenth year. Ninety percent of students choose to continue their education. Sixty percent enter technical or commercial schools. Vocational education includes apprenticeships and courses leading to a technical or commercial examination. The programs are usually three or four years in length, and train students in trade skills or prepare them for further studies. Student apprentices receive a stipend. About 90 percent of program participants find work in their field within three months of graduation.[7]

Denmark values hands-on experience in its vocational teachers. Faculty in technical or commercial schools are recruited directly from trades, and have a minimum of five years of trade experience.

> *"The future now belongs to societies that can organize themselves for learning."*
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> ***Thinking for a Living: Education and the Wealth of Nations,***
> Ray Marshall and Marc Tucker, p. xiii.

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[6] U.S. General Accounting Office, p. 18.

[7] Council of Chief State School Officers, ***European Lessons from School and the Workplace***. (Council of Chief State School Officers, 1991): p. 30.

"*Our front-line workers–those in nonmanagerial and nontechnical positions, working directly on the plant floor or in direct contact with customers, on whom we will depend to produce the turnaround in productivity on which our future depends–may be the least skilled among those of all the major industrial nations.*"

Thinking for a Living: Education and the Wealth of Nations, Ray Marshall and Marc Tucker, p. xix.

Great Britain

In 1983 England passed the Technical and Vocational Education Initiative, which seeks to "better working life by making what (secondary students) learn at school, and the way they learn it, more relevant to the world of work."[8] Objectives of the program include linking curriculum to the working world, teaching students such workplace skills as problem solving and teamwork, and helping students learn about working life through actual work experience. The government's goal is for every person age 14-18 to have access to the program.

England strives to link schools closely with the workplace. Teachers work with placement officers from the employment service to give students information about jobs and placement assistance. The government also funds school-employer linkages in which employers offer training and jobs to students who have achieved certain academic and behavioral standards. England has established national skill standards which guide training content and competency measures.

England has two major education and training programs for out-of-school unemployed youths: The *Youth Training Scheme* and the *Employment Training Program*.

The *Youth Training Scheme* guarantees one to two years of training to every unemployed youth age 16-17. Between 1983 and 1989 the program trained about 2 million participants–about 70 percent of all eligible out-of-school youths. After completing the program, about four-fifths of the participants secured a job or enrolled in further training or education within a few months.[9] However, the program has been criticized for providing youths with inadequate skill levels or credentials. The program is also stigmatized in the eyes of some youths and employers, who believe that the training is often of low quality.

The *Employment Training Program* guarantees up to six months of training for unemployed persons between the ages of 18 to 59 who have been unemployed for at least six months. Participants receive classroom and on-the-job training, as well as placement assistance.

Federal Republic of Germany

This country's national commitment to quality academic and vocational education is articulated in the Constitution of the Federal Republic of Germany:

> To provide each individual with high-quality academic and vocational training commensurate with his/her abilities and interests and to continue to make opportunities for personal, occupational, and political education available to him/her throughout his/her life.[10]

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[8] Employment for the 1990s. (Her Majesty's Stationary Office, Dec 1988).

[9] U.S. General Accounting Office, p. 39.

[10] Council of Chief State School Officers, p. 12.

Career awareness begins early in Germany, through a formal curriculum which is mandatory in all grades. Schools offer students orientation to the working world beginning in the seventh through ninth grades. These courses include one to two weeks of work experience arranged by the schools, after which employers provide evaluations of student performance. Classes also visit the local employment office. In the ninth grade, employment service staff provides students with information about local jobs and apprenticeships, and offers employment counseling to youths desiring it. Students are provided with an incentive to do well in school: those who perform the highest academically are usually offered the best-paying jobs or the most desirable apprenticeships.[11]

During the fourth or six year of school, students and their parents decide among three main types of secondary schools: the ***Hauptschule***, which culminates in a main school-leaving certificate; the ***Realschule***, which provides students access to specialized technical schools or upper secondary schools that offer training in nonacademic occupations; the ***Gymnasium***, which leads to college education; the ***Gesamtschule***, an integrated school which combines all three forms of secondary schools; or the ***Sonderschule***, where students with disabilities acquire general school-leaving certificates.[12]

The German education system has often been criticized for forcing students to make career decisions before they are adequately prepared to do so. It has also been criticized for tracking students into "college bound" and "non-college bound" lines of study. Both criticisms have some validity. However, the Council of Chief State School Officers (1991) reports that, in recent years, Germany has made strides in making it easier for students to transfer from one type of secondary school to another.[13] And young people who pursue apprenticeship training often choose to enroll in higher education after completing the apprenticeship. Glover and Tolo, et al. (1993) report that "the preferred pathway to careers in banking and insurance is to gain some practical work experience in the industry through serving an apprenticeship, then enter a university. Fully a third of Germany's engineers are former apprentices who then went to a university."[14]

> *While American society often stigmatizes people who do not attend college as somehow inferior to college-educated individuals, German society does not attach a stigma to apprenticeship training.*

The German apprenticeship training system involves two learning arenas–school and the work place–and so is often called the "dual system." Some of Germany's largest and best employers participate.

About two-thirds of German youth choose a route which leads to apprenticeship training. About one-fourth enter higher education. The remaining youths–about ten percent–drop out or enter the unskilled labor market, say Marshall and Tucker (1992). The German government makes strong efforts to reduce the latter percentage to zero.[15]

While American society often stigmatizes people who do not attend college as somehow inferior to college-educated individuals, German society does not attach a stigma to apprenticeship training. Instead, Germany considers the apprentice certificate the credential of a "fully accomplished adult in society," says the Council of Chief State School Officers (1991). "It is the ticket to a wide range of middle-management positions in a variety of professions, crafts, and careers in small and large companies."[16]

Almost all youths who do not attend college participate in apprenticeships, which are available in about 20,000 occupations. Each apprenticeship lasts about three years. Youths receive a stipend while in training and usually spend one or two days a week in state-run vocational school classrooms, studying subjects such as mathematics, social studies, and German. The remainder of the week is spent with employers in on-the-job training. The principal purpose of the apprenticeship system is to ensure a high-quality, very skilled work force. Ninety percent of apprentices are hired by the firm that trained them.[17]

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[11] U.S. Department of Labor and U.S. Department of Education, ***The School-to-Work Connection***, (Washington, DC: U.S. Department of Labor and U.S. Department of Education, 1991): p. 1.

[12] Council of Chief State School Officers, p. 12.

[13] Ibid., p. 13.

[14] Glover and Tolo, et al., p. 6.

[15] Ray Marshall and Marc Tucker, *Thinking for a Living: Education and the Wealth of Nations*, (New York: BasicBooks, a Division of Harper Collins Publishers, 1992): p. 13

[16] Council of Chief State School Officers, p. 7

[17] Marshall and Tucker, p. 46

Committees of national-level government, business, and union representatives develop apprenticeship curricula, certification procedures, and skill standards. Trainees are taught more than what they will actually be expected to use on the job. Students completing apprenticeship training must pass national comprehensive final examinations to ensure that they are adequately prepared. These examinations include practical, theoretical, written, and oral sections, and are monitored by a committee composed of employers, employees, and a vocational educator.

The examination is intense, reports the Council of Chief State School Officers (1991):

> Students in technical programs such as electrical mechanics might be tested in mathematics, technical drawing, technology, and social science. They might also be tested in project planning and the ability to recognize, analyze and solve planning problems in a hands-on manner. For students in food preparation, the theoretical part of the test might include biochemical processes, mathematics and calculations of quantity. The practical aspects would involve making or creating a product.[18]

Apprentices can take the examination up to three times. Between 85 and 90 percent of apprentice trainees pass the examinations. If an apprentice fails the examination because of poor training by an employer, the employer can lose his or her valued status as a trainer. The employer must also hire the failing apprentice at the wage regularly paid for the position.

Japanese Education

Japanese schools emphasize student effort rather than ability. All students are expected to strive for success in school and in life. Society tends to view achievement as changeable. Students are expected to value the achievement of the entire class, and take care of their classmates to make sure no one lags behind. Teachers devote special attention to individual students so that few perform at low levels.

Parental involvement, especially that of mothers, is intense. Japanese mothers are expected to be devoted to their children. A mother sleeps in her child's room, helps him or her study, attends school to take class notes when the child is ill, and is always expected to communicate high expectations for the child's performance in school and life.[19]

The Japanese government also provides intensive support. It ensures uniform educational quality in schools by providing all schools with similar resources. Vocational schools are given somewhat greater financial resources because of the need to maintain and upgrade high-tech equipment. Japan also ensures educational quality by paying teachers well and uniformly. Japanese society apparently places greater value on the teaching profession than does American society. For example, the salaries of beginning Japanese teachers are about equal to those of beginning engineers. Most teachers come from the top 30 percent of their college graduating class.[20]

A Japanese mother sleeps in her child's room, helps him or her study, attends school to take class notes when the child is ill, and is always expected to communicate high expections for the child's performance in school and life.

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[18] Council of Chief State School Officers, pp. 20-21.

[19] Ibid., p. 52.

[20] U.S. General Accounting Office, p. 34.

While Japanese students in lower grades are not grouped by ability, a rigid form of tracking by academic ability begins when they prepare to enter high school. High schools are ranked academically within districts. Students take an examination to determine what school they will attend. To a large extent, the high schools students attend will determine their post-high school job prospects. Some 35 percent of Japanese high school graduates go directly into the work force.[21] Japanese employers recruit heavily from high schools, relying on teacher recommendations and academic achievement to guide hiring decisions. Each school has links with specific employers, with the most prestigious employers recruiting from higher-ranked schools. Employers interview and hire almost all of the students recommended to them.[22]

Marshall and Tucker (1992) say this about the Japanese education system:

> . . . the basic standard set by the Japanese school system is probably the highest in the world. Many observers believe that the average Japanese high school graduate reaches a level of achievement in the native language, science, and mathematics equal to or higher than that of the average American baccalaureate degree holder. If that is so, then by American standards, the vast majority of those entering the Japanese work force have the equivalent of an American four-year college degree. That is why Toyota can expect the people it recruits from high school to master an engineering curriculum when they report for work on the assembly line.[23]

After entering the workplace, high school graduates become a part of on-the-job learning systems that Glover and Tolo, et al. (1993) call "some of the most widely respected in the world."[24] About three-quarters of companies provide training to their employees. According to Marshall and Tucker (1992), most large Japanese employers expect to provide almost all necessary vocational training.[25] On-the-job peer and team teaching are strongly supported, and management is evaluated on their effectiveness as teachers as well as managers. Employers encourage employee self-development: many companies circulate lists of recommended courses offered outside the company, and often offer employees reimbursement for taking the courses. Companies often keep records of their employees' efforts at self-development, and consider these efforts favorably when deciding which employees to promote.[26]

We Can't Transplant the Tree

Like well-tended trees in good soil, programs in other countries have put down deep roots and often produced excellent results. However, each program is rooted in the culture of the country that developed it. None of these programs could be transplanted in its entirety to American cultural soil and thrive. The fit would be wrong. For example, Japanese culture stresses the importance of the group, rather than the individual; American culture stresses the importance of individuals and expression of individual freedom. Also, the Japanese education system uses a rigid tracking approach that closes options for youths even before they become teenagers, while the U.S. educational system strives to discourage tracking. Cultural homogeneity also plays a role: Germany, Japan, Denmark, Sweden, and England all have relatively homogeneous populations, and cultural norms are usually clear cut. The United States is a patchwork of different cultures and cultural norms.

America needs to develop school-to-work transition systems that are the "right fit" for the diverse cultural and social mosaic of this country. Educators and businesses across the U.S. are seeking this "fit." The solution seems not to lie in one rigid, inflexible system, but in a series of approaches, each tailored to the needs of the community, youths, and industries it serves. The possible elements of this system are many: alternative programs for students who are not well served by traditional education, cooperative education, internships, technical training, Tech-Prep programs, career academies, school/business partnerships, and apprenticeships, to name a few of the most prevalent forms. The next chapter explores some of those models.

[21] Ibid., p. 18.

[22] Ibid., p. 38.

[23] Marshall and Tucker, p. 52.

[24] Glover and Tolo, et al., pp. 5-6.

[25] Marshall and Tucker, p. 51.

[26] Glover and Tolo, et al., p. 6.

Chapter 3

Integrating School and the Workplace: Program Models

> *"The more teachers can link their lessons and materials to actual work-site experiences, the more likely it is that programs will be successful."*
>
> U.S. Department of Labor

While the U.S. does not yet possess the comprehensive training systems of its competitor nations, America has long been experimenting with models which, when combined in a systemic way, can help ensure that American youths are prepared to enter the work force. While many of these models and programs have existed for years, relatively few American youths have participated in them.

According to the Council of Chief State School Officers (1991), while technical and vocational education are widely available in the U.S., very few young people who graduate from high school have participated in a quality program which provides workplace skills development, the opportunity for further training, or an open door to skilled employment.[1] For example, in 1992-93, only 14 percent of all Texas students were enrolled in vocational education programs, according to Texas Education Agency statistics.[2]

No one approach has proven more effective than any other in preparing young people for the workplace. The effectiveness of each approach varies widely, depending on many factors: the characteristics of the community which hosts the program; the level of planning and preparedness behind it; the level of commitment by schools, businesses, and students; the occupational skills being taught; and the personal preferences and characteristics of each student enrolled in the program. No one approach works for every community or every student.

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[1] Council of Chief State School Officers Resource Center on Educational Equity, *CONCERNS* (Newsletter), December 1991.

[2] Texas Education Agency, *Snapshot '93 1992-1993 School District Profiles*, (Austin, Texas: Texas Education Agency, 1993).

Glover and Marshall (1993) define seven characteristics that are important in designing a community-wide school-to-work transition initiative:

1. Achievement in school should be connected to rewards in the labor market. Students should know that achievement in school pays off later in life. "Incentives are important for everyone," say the researchers.[3]
2. A variety of programs and approaches should be available, because no one approach works for every student.
3. The training system should be available for all youths, not just those in special populations. The system should be supported by regular funding, and not rely on grants for continued support.
4. Continuing information is needed about program graduates and training providers. Young people should be tracked after they leave school and their progress in the workplace monitored to provide information about how to improve programs.
5. Youths need better and earlier occupational information and guidance to enable them to make informed decisions about careers.
6. Vocational programs need to have a strong academic content.
7. The system should not close options for higher education.[4]

While school-to-work transition approaches vary widely, effective programs tend to cluster in two general categories, says Kazis (1993):

1. programs built around curricular approaches that bring work and career issues into the classroom (including integrating academic and vocational education, Tech-Prep, career academies, and SCANS implementation efforts); and
2. programs that get young people out of the classroom and into work and the labor market (including compacts, cooperative education, school-based enterprises, service learning, and youth apprenticeships).[5]

The next section examines effective approaches. Included are some, but by no means all, of the approaches which have often proven effective in preparing young people to enter the work force. These program types are used separately or combined to form many variations.

Integration of Real-World Skills and Academic Content

A linkage between academic content and what the "real world" expects of students is central to successful school-to-work transition programs. According to the U.S. Department of Labor (1992), "The more teachers can link their lessons and materials to actual work-site experiences, the more likely it is that programs will be successful."[6] Linking academic and work site experiences can increase students' motivation to stay in school, and tends to generate higher-level academic and thinking skills. The skills the U.S. Department of Labor identified as important to incorporate into classroom content include: ***employability and life-coping skills***, such as oral communication, taking directions, workplace attitudes, resolving conflict, accepting criticism, dealing with alcohol and drugs, and quality consciousness; and entry-level, job-specific ***occupational skills***.

Integration of "real-world" and academic content is a method of instructional delivery and class structure rather than a specific program.

Integration of academic and career education may be accomplished in many ways, such as: curricula which teach academic subjects through practical applications, elevating the academic content of vocational classes, offering Tech-Prep sequences that coordinate the last two years of high school with two years of college in a technical field, organizing the entire high school curriculum around a career theme, or concerted efforts of teachers to integrate vocational and academic content.

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[3] Robert W. Glover and Ray Marshall, "Improving the School-to-Work Transition of American Adolescents," *Teachers College Record*, Spring 1993, p 597.

[4] Glover and Marshall, pp. 597-599.

[5] Richard Kazis, *Improving the Transition from School to Work in the United States*, (New York: American Youth Policy Forum Competitiveness Policy Council, Jobs for the Future, 1993): p. 7.

Integration of "real-world" and academic content is a method of instructional delivery and class structure, rather than a specific program. Approaches vary as widely as the creativity of the schools and individual teachers who seek to integrate academic and workplace skills. One example of integrating academic and "real-world" skills might be an English class where students write brochures for local businesses. Their research would involve consulting one-on-one with the businesses to discover their needs. Students would thus be exposed to workplace skills and requirements.

Another example is team teaching in vocational programs. Schools using this approach assign academic and vocational teachers to work together in classes, using creative approaches to integrate their subject matter into vocational courses. For example, at the **Dauphin County Technical School in Harrisburg, Pennsylvania**, academic departments have been eliminated. Instead, the school has assigned English, mathematics, science and social studies teachers to each of its four career concentrations, called "clusters." The academic teachers and vocational teachers closely coordinate their efforts to combine academics and vocational training so that the students get the most out of the learning experience. Flexibility is the rule: time limits are not imposed on classes, and teachers have extraordinary latitude in use of time and approaches.[7]

The **Southern Regional Education Board (SREB)** has been active since 1988 in developing curricula which integrate academic and vocational curriculum. Its **"High Schools That Work"** model stresses "raising expectations about the ability of non-college bound students to master high-level academic concepts."[8] The model creates curriculum for students who do not plan to attend college which is equally as vigorous as the curriculum for students who plan to attend college. The curriculum focuses on Tech-Prep processes. In addition to integrating within academic and vocational courses, the SREB model requires students to complete a program of study with a minimum number of high-level academic and vocational courses. In 1992, the SREB "High Schools That Work" consortium consisted of 100 schools in 19 states. The SREB supplies technical assistance and leadership to schools which are implementing the model. The Texas Education Agency, a member of the SREB, has selected 12 Texas pilot sites which will implement "High Schools That Work" during the 1993-1994 school year.

Other examples of programs integrating academic and workplace skills appear in Chapter 7, "Efforts in Texas Schools and Communities"; Chapter 8, "SCANS Competencies into the Classroom"; and "Developing Linkages Between Classrooms and the Workplace" in Chapter 10.

> "Schoolwork centers on individuals, while real work, personal life, and recreation almost always involve other people. School instruction focuses on 'pure thought,' whereas most productive activities outside school involve … 'cognitive tools' such as books, notes, calculators, and computers. School instruction focuses on a relatively narrow range of verbal, mathematical, and other forms of abstract thinking, yet success in life is often based on artistic, mechanical, or interpersonal abilities."

Smart Schools, Smart Kids, Edward B. Fiske, 1991, p. 64.

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[6] U.S. Department of Labor. *School-to-Work Connections: Formulas for Success.* (Washington, DC: U.S. Department of Labor, 1992): p. 9.

[7] Paulette Lee. "The Dream Team," *Vocational Education Journal.* (American Vocational Association, November/December 1992): p. 30.

[8] Texas Council on Vocational Education. *Integration: Preparing Texas Students for the Work Force* (Austin, Texas Council on Vocational Education, 1993): pp. 16-17.

“High Schools with Character” or “Focused Schools”

These schools successfully integrate academic and vocational studies leading to postsecondary education and employment. The schools have a dual mission: to prepare students for college and for an occupation. They typically hold strong expectations for all students, minimize ability grouping, and may base admission on student interest and aptitude rather than on test scores. Such schools usually have a strong identity with a particular industry, and provide for student cooperative learning.

The **Aviation High School, in New York, New York,** is an example of a focused school. This is the only high school in the United States devoted to preparing students for careers in aviation-related fields. Admission is based largely on past academic record, achievement test performance and attendance. The approximately 1,600 students in this high school have a chance to specialize in aviation mechanics and engineering careers while receiving a solid academic education. Facilities include a hanger of 20 airplanes and various aviation equipment. Students can receive diplomas and certificates from New York State, New York City, the Federal Aviation Administration, and the Federal Communications Commission upon graduation.

The school is relatively free of crime and discipline is rarely a problem. Course offerings change periodically to accommodate requirements from New York State and the aviation industry. Students are encouraged to take higher-level courses. Students take eight terms of science, up to four years of mathematics, and eight terms of English and social studies. These academic courses are accompanied by intensive career exposure. A typical student schedule might include ten periods each week of exploratory shop in Grade 9, 15 periods per week studying composite airframes in Grade 10, 20 periods of basic power plant operations in Grade 11, and a specialization of 20 periods per week in Grade 12. Graduating students go on to careers in the airline industry or other technical trades. About 65 percent pursue some form of higher education.[9]

Many other high schools around the country use this same model. Notable examples are the **Chicago High School for Agricultural Sciences** in Chicago, Illinois; the **High School of Fashion Industries** in New York, New York; the **Murray Bergtraum High School for Business Careers** in New York, New York; the **High School for Law Enforcement and Criminal Justice** in Houston, Texas; and the **Northside Health Careers High School** in San Antonio, Texas. (The latter two schools are profiled in Chapter 7.)

Career Academies

These are schools-within-schools which revolve around a broad theme (such as “health careers”) rather than prepare students for particular occupations. Typically, teams of vocational and academic teachers work with a group of students for two or three years. These academies have strong linkages with related private sector organizations. Employers commit resources and job placement assistance for the students. This partnership ensures that the training students receive meets the skills needed in the job market.

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[9] National Center for Research in Vocational Education. *Exemplary Urban Career-Oriented Secondary School Programs.* (Macomb, Illinois: National Center for Research in Vocational Education, 1989).

Academy models have been operating since 1969, when the first pilot program was established in Philadelphia. By 1991, nearly 80 academy programs around the U.S. were affiliated with the National Academy Foundation (NAF). The foundation promotes four primary models: The Academy of Finance, the Academy of Travel and Tourism, the Academy of Public Service, and the Fort Academy of Manufacturing Sciences.

The oldest of the NAF academies, the **Academy of Finance,** began operating in the New York City school system in 1982 as a joint project between American Express, Shearson Lehman Hutton, and the New York City school system. Students enter the academy in their junior year. Students are not chosen based on strict criteria; rather, they are chosen based on their interest in the academy's career focus. During their junior year, the students are required to take two or three academy courses per semester. The courses are designed by industry representatives and educators. At the end of their junior year, students interview for internships with local finance-related businesses and are hired as entry-level employees. Internships are financed either entirely by the employers, or by both the employers and the state. In their senior year, students may take college level courses, either at local colleges or through the high school.[10]

Studies in Florida and North Carolina have found that schools with Tech-Prep systems have been able to reduce dropout rates by as much as one-third.

Tech-Prep

Technical preparation (Tech-Prep) efforts link from two to four years of high school with two or more years of postsecondary training, usually at a community college. In Texas, Tech-Prep links four years of high school with two or more years of postsecondary training. This learning process often links theoretical and practical applications in more complex ways than does a regular high school curriculum. The process focuses on a coherent sequence of courses that leads to an associate degree or certificate in a specific field, and may include on-the-job training. Tech-Prep was given federal monetary support through the Carl D. Perkins Vocational and Applied Technology Education Training Act of 1990.

Tech-Prep systems are operated by consortia of businesses, secondary schools and institutions of higher learning. Texas is served by 25 Tech-Prep consortia. (The resource appendix of this document contains a complete listing of Texas consortia.) Tech Prep runs parallel to college preparatory curricula, and offers a coherent sequence of courses which prepares students for a two-year technical degree program in a community college, or an apprenticeship program. Tech-Prep pathways lead to an associate degree or a certificate of achievement. These efforts target students in general education, challenging them with courses that are often more difficult than those in the regular curriculum. (See Chapters 4 and 7 for more about Tech-Prep efforts.)

Tech-Prep holds great promise to prepare young people for high-skills jobs. These efforts may also significantly reduce school dropout rates. Studies in Florida and North Carolina have found that schools with Tech-Prep systems have been able to reduce dropout rates by as much as one-third.[11]

Many public schools and community colleges have seen the potential in Tech-Prep, and have formed consortia to develop quality systems. By June 1990, 122 Tech-Prep sequences operated in 33 states (Stern, 1991, p. 33). Growth has exploded since then. By May 1993, in Texas alone, the Texas Education Agency and Texas Higher Education Coordinating Board had recognized more than 100 efforts which meet the state's strenuous guidelines for Tech-Prep.

[10] **Robert W. Glover and Kenneth W. Tolo, et al., *Bridging the Gap: Implementing School-to-Work Transition in Austin,* (Austin, Texas. LBJ School of Public Affairs, The University of Texas at Austin, 1992): p. 21.**

[11] Ibid., p. 17.

The William T. Grant Foundation (1991) identified six facets which distinguish quality Tech-Prep efforts:

1. strong career counseling in early high schools years;
2. effective secondary school/community college collaboration leading to integrated, coherent curricula;
3. shared secondary school-community college administrative oversight and responsibility;
4. applied academics course work in basic subject areas;
5. increasing technical concentration from the first year through the last year of the program; and
6. strong and enthusiastic business participation in program planning, curriculum development, and student recruitment and retention.[12]

See Chapter 7 for descriptions of several Texas Tech-Prep efforts.

School-Business Partnerships

In this popular and highly effective model, businesses work closely with schools to provide career preparation for students. Partnership forms are limited only by the imagination and resources of the partners. Businesses may provide after-school and summer jobs, mentoring and tutoring, grants, technical expertise, interview experience, aptitude and ability testing, and sometimes guarantees of postsecondary employment. Sometimes businesses tie students' academic performance to preferential hiring and wage scales.

An excellent example is the **Boston Compact**, an agreement between Boston public schools and the business community to meet educational improvement goals and link these improvements to increased employment opportunities. The compact has been replicated in at least 12 other cities. The Boston Compact brings together public schools, universities, businesses, unions, and the mayor's office to improve student achievement, provide work force preparation, and provide increased opportunities for students to enter the job market or postsecondary education. The compact has been very successful in securing jobs for its graduates. In 1989 alone, 1,107 graduates of a class of 3,000 found full-time jobs averaging $6.75 per hour with some 900 businesses.[13] Employers indicated that 85 percent of these youths were satisfactory employees. Also impressive was the rate of employment for African-American graduates compared to white graduates: in 1989 the national unemployment rate for African-American high school graduates was almost 50 percent, compared with about 25 percent for white graduates.[14] Both African-American and white graduates

> "The emerging global economy requires workers who are 'smart'... who can analyze new situations, come up with creative solutions, and take responsibility for decisions relating to the performance of their jobs ... to produce 'smart' citizens, we need 'smart' schools and 'smart' kids."

Smart Schools, Smart Kids, Edward B. Fiske, 1991, p. 64.

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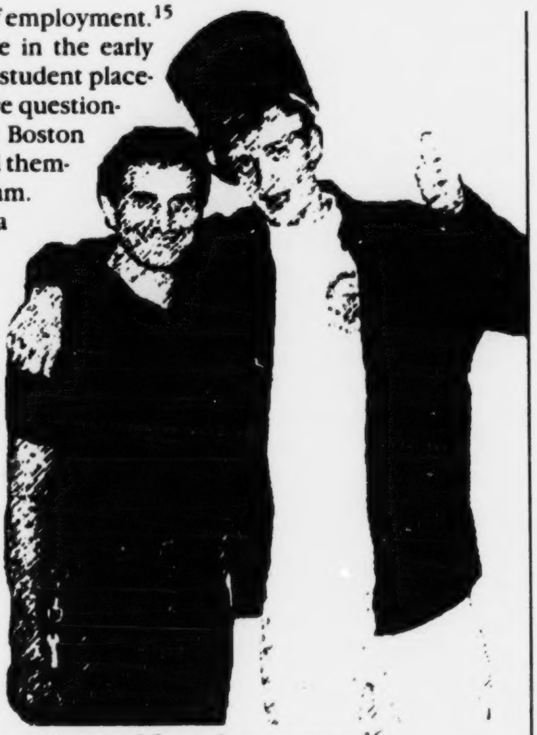
[12] William T. Grant Foundation Commission on Work, Family and Citizenship, ***States and Communities on the Move: Policy Initiatives to Build a World-Class Workforce.*** (Washington, DC: William T. Grant Foundation, 1991): p. 25.

[13] National Center on Education and the Economy, ***America's Choice: High Skills or Low Wages!*** (Rochester, New York: Commission on the Skills of the American Workforce, 1990): p. 107.

of Boston Compact programs had equal rates of employment.[15] The Boston Compact came under critical fire in the early 1990s when the recession adversely impacted student placements. At the same time, some employers were questioning the job preparedness of program graduates. Boston schools and businesses have since recommited themselves to improving the quality of the program. Similar compacts have been established in a number of other communities.



Project GEMMA, in Dayton, Ohio, is another example of a partnership effort. Eighteen local educators, mostly mathematics and science teachers from Grades 6-12, worked with engineers, marketing analysts, environmental consultants, physicists and other scientists during the summer of 1991. The experience changed the teachers' perspectives about how their course material should be taught. Teachers returned to their classrooms with real-world applications of what they had been teaching. They planned to include more cooperative learning activities, push for integrating technology across all subjects, and assigned more open-ended problems where students could discuss options and formulate answers.[16]

In another partnership effort, schools in **Frederick County, Maryland,** invited local business people, doctors, employees of the National Institute of Standards and Technology, the Burroughs corporation, the National Institute of Health, and the U.S. Army's chemical warfare laboratory at Fort Dietrick to observe science classes at all grade levels. The visitors then made recommendations to improve the science curriculum to meet the needs of the technically demanding workplace. The visitors interviewed students and teachers, and volunteered their time. Many are working with schools to improve the science curriculum. Both teachers and visiting professionals gained a greater respect and understanding for what the other does.[17]

Another major partnership is the **Workplace Literacy Program** in Mt. Morris School District in Flint, Michigan. This program is a collaborative effort between the Mt. Morris Education Association, the Mt. Morris School district, the Rochester-Flint General Motors plant, and Local 659 of the United Auto Workers Union. In 1989, when the program was established, only 20 percent of the district's seniors went on to college, and only half of those students graduated. Concerned that students were not being prepared with the skills they needed to succeed in life, these groups banded together to restructure the district's curriculum. Using a $200,000 grant from General Motors and the United Auto Workers Union, Mt. Morris teachers and representatives from General Motors spent the summers of 1989-1992 developing a workplace skills course for high school freshmen, supported by academic courses where students learn the skills they will someday use in the work force. The program includes computer literacy, career studies, study skills, and a career study project. To fulfill this project, students select a career area and conduct extensive investigations into that field. These explorations often include hands-on experience working with professionals in the field of interest. The program combines career exploration with an emphasis on taking difficult courses.[18]

Project C³ in Fort Worth, Texas, is a nationally recognized school/business/community partnership. Project C³ is profiled in Chapter 7.

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[14] Robert W. Glover and Kenneth W. Tolo et al., ***Bridging the Gap: Implementing School-to-Work Transition in Austin,*** (Austin, Texas: Lyndon Baines Johnson School of Public Affairs, The University of Texas at Austin, 1993).

[15] Robert W. Glover and Ray Marshall, "Improving the School-to-Work Transition of American Adolescents," ***Teachers College Record,*** Spring 1993, pp. 599-600.

[16] Texas Research League, "Narrowing the Skills Gap," ***ACHIEVE!*** (Newsletter), September 1992.

[17] Ibid.

[18] Staff, "School-to-Work Transitions that Work," ***NEA Today,*** December 1992.

Youth Apprenticeships

Jobs for the Future defines youth apprenticeship as "a learning program for young people, age 16 and older, that combines on-the-job learning with classroom instruction, that bridges secondary and post-secondary schooling, and that results in certification of mastery of work skills."[19] Only about 3,500 high school youths participated in apprenticeship programs in 1991.[20]

These programs are experiencing rapid growth, stimulated in part by their popularity and effectiveness in Europe. Apprenticeship programs usually combine on-the-job learning with some level of classroom support. They usually last from two to five years and lead to a skill certification or other credential which signifies total mastery of a skill or craft. Few apprenticeship programs are available in the United States. Existing U.S. programs usually train individuals for construction and manufacturing trades.

Theoretically, American apprenticeships could start at age 16. However, child labor laws and insurance regulations prohibit employers from offering young apprentices positions in hazardous occupations, like construction.[21] The average age of American participants is between 27 and 29. Fewer than 2 percent of high school graduates enter apprenticeship programs.[22] In contrast, apprenticeships are widely used in Europe to prepare young people for entry-level employment (see Chapter 1). The U.S. programs offer work experience and guided learning within an occupation, structured linkages between secondary and postsecondary credentials and skill certification, and close collaboration between schools and workplaces.

Several states are instituting apprenticeship programs. **Oregon** started the nation's first statewide apprenticeship program in 1991, and **Arkansas** started one later that year. **Washington**, **Tennessee**, **Minnesota**, and **Virginia** are studying the idea. **California**, **Iowa**, **Maine**, **Michigan**, **Oregon**, and **Wisconsin** have received planning grants for apprenticeship programs from the U.S. Department of Labor.[23] Apprenticeship legislation passed the Texas Legislature in the spring of 1993 (see Chapter 5).

A report by the Federal Committee on Apprenticeship expressed concern that many current efforts to create apprenticeship programs do not adhere to true apprenticeship principles, and result in less intensive approaches than do true apprenticeship programs. The report, titled *The Meaning of Apprenticeship: When and How to Use the Term* (1992), outlines eight essential components of true apprenticeship programs:

1. Apprenticeship is a training strategy that a) combines supervised, structured on-the-job training with related theoretical instruction and b) is sponsored by employers or labor/management groups that have the ability to hire and train in a work environment.
2. Apprenticeship prepares people for skilled employment by conducting training in bona fide and documented employment settings. The content of training, both on-the-job and related instruction, is defined and dictated by the needs of the industry. The length of training is determined by the needs of the specific occupation within an industry. In the building trades, for example, some apprenticeship programs are as long as five years with up to 240 hours of related instruction per year.
3. Apprenticeship program requirements are delineated in federal and state laws and regulations. The National Apprenticeship Act of 1937 and state laws provide the basis for the operation of formal apprenticeship training programs. These laws and regulations establish minimum requirements for protecting the welfare of the apprentice, such as the length of training, the type and amount of related instruction, supervision of the apprentice, appropriate ratios of apprentices to experienced workers, apprenticeship selection and recruitment procedures, wage progression, safety, etc.

[19] Ibid., p. 68

[20] U.S. General Accounting Office, *Training Strategies: Preparing Noncollege Youth for Employment in the U.S.*, (Washington, DC: U.S. General Accounting Office, 1990).

[21] Glover and Marshall

[22] Glover and Tolo, et al., p. 22.

4. Apprenticeship, by virtue of a legal contract, leads to a Certificate of Completion and official journeyman status. These credentials have explicit meaning, recognition and respect in the eyes of federal and state governments and relevant industries.

5. Apprenticeship programs involve a tangible and generally sizable investment on the part of the employers or labor/management program sponsor.

6. Apprenticeship programs pay wages to their participants, at least during the on-the-job training phase of the apprenticeship, and increase these wages throughout the training program in accordance with a predefined wage progression scale.

7. Apprenticeship is a training strategy in which participants learn by working directly under the supervision and tutelage of masters in the craft, trade, or relevant occupational area.

8. Apprenticeship is a training strategy that involves a written agreement and an implicit social obligation between the program sponsor and the apprentice. The written agreement, which is signed by both the apprentice and the program sponsor and is ratified by government, details the roles and responsibilities of each party. The implicit social obligation gives employers or program sponsors the right to expect to employ the apprentice upon completion of training given the investment in training and gives the apprentice a reasonable right to expect such employment. Labor market conditions should guide the size of training programs to enable each party to maintain his or her side of the obligation.[24]

The report emphasizes that apprenticeship is *not* cooperative education, vocational education, "two plus two" programs, or summer or part-time work experiences. Apprenticeships are distinguished from other training options by elements such as training program sponsorship and location, the skills acquired, the value attached to the credential earned, curricula content defined exclusively the workplace, wage requirements, the written agreement, and the contract that exists between the program sponsors and their participants. Participants emerge from true apprenticeship programs as fully trained, highly skilled workers.[25]

Cooperative (Co-Op) Education

This design, which is an important component of many high school career education programs, combines classroom instruction with on-the-job training to prepare students to meet career goals. Most participants are high school juniors and seniors. About 8 percent of U.S. high school juniors and seniors (430,000 students) are enrolled in high school co-op programs.[26] Students earn grades and credit for their experiences both in school and on the job. Employers sponsor training and provide performance evaluations of each student. Schools establish program admission standards, which typically include grade point average and attendance requirements. Schools often screen students before referring them to employers for job interviews. Co-op education placements are paid positions.

Cooperative education programs are similar to short-term apprenticeships. While apprenticeships are primarily industry-based, with primary training occurring on the job, cooperative education programs are usually school-based. Primary instruction takes place in the classroom and is supplemented with work site experience. While apprenticeships extend beyond high school, cooperative training typically ends with high school. While apprenticeships train workers for highly skilled occupations requiring extensive training, cooperative education programs usually function best

> "Not only does Johnny need to be able to pass the algebra test, he also needs to know how algebra is used in the 'real-world.'"
>
> *Texas Skills Development Program*, Texas Department of Commerce, 1993.

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[23] State Comptroller John Sharp, ***Against the Grain: High-Quality, Low-Cost Government for Texas.*** (Austin, Texas: Texas Comptroller of Public Accounts, 1993): pp. 105-106.

[24] Federal Committee on Apprenticeship, the U.S. ***The Meaning of Apprenticeship : When and How to Use the Term. A Policy Recommendation***, (Washington, DC: 1992).

[25] The Federal Committee on Apprenticeship, ***The Meaning of Apprenticeship: When and How to Use the Term***, (Washington, DC: U.S. Department of Labor, 1992).

[26] U.S. General Accounting Office, 1990.

Learners who have dropped out of school often find that their "career path" is a dead-end street. Alternative programs can turn that dead end into an opportunity.

when they train students for occupations such as retailing and clerical work, which usually do not require intensive training.[27]

While cooperative education programs have proven effective in preparing young people for the work force, they are not as widely used as they could be. The main obstacle to expanding cooperative education for students who do not plan to attend college is inadequate employer involvement, according to researchers at the Center for Policy Development at The George Washington University (1992).[28]

"Alternative" Programs

These programs perform a vital role in improving learner school-to-work transitions. Skilled employment calls for high levels of education and skills. Learners who have dropped out of school often find that their "career path" is a dead-end street. Alternative programs can turn that dead end into an opportunity.

Alternative programs perform a tremendous service to learners who have dropped out of school and other youths who are not well-served by traditional education. Alternative programs integrate remedial instruction with other subject areas. Many also offer work/study programs and tie curricula to skills students need to know on the job. Scheduling is often very flexible, allowing students to fit the program into their needs. Students can master material at their own pace. These programs may offer child care, family counseling, personal and career counseling, and referrals to other social service agencies. These programs can help learners achieve a high school diploma or GED certificate and prepare them for further education or training.

One example of an alternative program is the **New Futures School** in Albuquerque, New Mexico. This program provides employment training for eligible teen parent students during the school year. The school offers a combination of activities for the employment and training of participants, including classroom training leading toward a high school certificate of completion or diploma; employment through subsidized work experience at public and nonprofit organizations; or partially subsidized on-the-job training activities in the private sector, resulting in job placement or the attainment of youth competencies. A "Jobs Training" class is offered to 30-40 students per year. This program emphasizes job-finding and job-keeping skills. Students who successfully complete a 15-unit series in the "Jobs Training" class are provided with a listing of potential employers. Students remain in the "Jobs Training" class for one semester and earn school credit for it. Each 90 hours of work experience earns a semester's school credit. Counseling helps young mothers learn to combine parenting responsibilities with working life.

Other examples of this program type are the Job Training Partnership Act-funded Job Corps; the Bowie County School of Success in Liberty-Eylau Independent School District, Texas; the PRIDE Center in San Marcos, Texas; and the KEYS Learning Center in Euless, Texas. (The latter three programs are profiled in Chapter 7.)

Work-Site Model

This model moves instruction out of the classroom and into the workplace. Students receive work-based, hands-on instruction which emphasizes skill competency. Students are paid for receiving the instruction. Teachers work closely with industry leaders to create curriculum and deliver instruction, and to guide students through the training. Students work beside adult employees, which gives them a sense of responsibility and maturity. This model often includes health care, child care, counseling, and other support services.[29]

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[27] Glover and Marshall, p. 603.

[28] Levitan, Mangum, and Mangum, *A Training Program for the 1990s: Reflecting on Campaign Proposals.* (Washington, DC: Center for Social Policy Studies, The George Washington University, 1992).

[29] U.S. Department of Labor, Employment and Training Administration, *School-to-Work Connections: Formulas for Success.* (Washington, DC: U.S. Department of Labor, 1992).

Integrated Model

This design combines elements of Tech-Prep, the academy model and work-site models. These programs are school-based and offer *all* students the opportunity to take classes which link academic with work-site learning. Students in Grades 9 and 10 typically take required academic classes, while they receive individualized career guidance to help them consider occupational interests. Students in Grades 11 and 12 can choose classes which include on-the-job training at an area business. Students earn high school diplomas as well as certification in an occupational area, and are prepared either for work or postsecondary education. This design discourages tracking by ability; rather, students are grouped by occupational interests. The distinctions between "vocational" versus "academic" students and "college-bound" versus "noncollege-bound" students are thus blurred.[30]

School-Based Enterprise

In some communities it may be impossible to find enough high-quality jobs to set up work-based school-to-work transition programs. Some schools faced with this situation begin their own businesses, such as desktop publishing firms or clothing stores. One of the most widely known school-based enterprises is the Foxfire project in Georgia. Foxfire was born when rural students were asked by their instructor to collect local folklore. The resulting collection was bound and sold. Several examples of Texas efforts appear in Chapter 7.

Youth Service and Service Learning

These programs involve young people in meaningful community service, getting them out of the classroom and into situations where they develop work skills, learn to take responsibility, and help their communities grow and develop.[31] While youth service programs have existed for years, they were lent additional federal support in September 1993 with the passage of the National and Community Service Trust Act. The legislation provides for a commission which offers training, funding and technical assistance to states and communities which wish to develop youth service opportunities. The legislation also established a national service program called "Americorps." Americorps is a full- and part-time service corps that provides participants with a limited wage while serving and a post-service award of $4,725 per year to be used for past or present educational expenses.

A variation of youth service, called **service learning**, combines community service with classroom learning. The services youths perform are linked to classroom curriculum, making school more relevant to real-life experience and helping youth get the most out of their service opportunities.[32]

Service programs take many forms. For example, students may tutor other young people, visit the elderly in nursing homes, renovate homeless shelters, or help clean up the environment. Service learning programs are increasing in number across the country, in part because research shows that many students learn exceptionally well through hands-on, experiential learning activities. Through service learning, students can develop new skills and positive attitudes. They also develop communication, problem-solving, and leadership skills, as well as gain practical knowledge, such as how to tutor, negotiate the complexities of a public agency, or weatherize a window. According to Samuel Halperin, director of the American Youth Policy Forum, service activities teach "the kinds of things employers are looking for: responsibility, teamwork, problem solving, and learning to learn."[33] The state of Maryland and at least 24 school districts across the country now *require* students to perform public service.[34]

Service activities teach "the kinds of things employers are looking for: responsibility, teamwork, problem solving, and learning to learn."

[30] Ibid.

[31] Kazis, p. 13.

[32] Ibid.

[33] Association for Supervision and Curriculum Development, *Update* (Newsletter), p. 5.

[34] Ibid., p. 4.

National Policies and Initiatives

The next chapter looks at national policies and initiatives which impact work force preparation and school-to-work transitions.

Chapter 4

National Policies and Initiatives

Although most education and job training programs are executed at the local level, national initiatives provide structure and often lend financial support for community efforts. During the 1992 presidential campaign, then-governor Clinton stressed the necessity for effective school-to-work transition programs, saying that such efforts were necessary to ensure the future economic health of the nation. He advocated a greater federal role in creating apprenticeship programs to assist young people who do not plan to attend college. He also called for reforms of postsecondary financial aid to increase the number of young people who attend college.[1] He proposed those reforms again during a February 17, 1993, address to a joint session of the U.S. Congress.[2]

> "More than ever before, nations that want high incomes and full employment must develop policies that emphasize the acquisition of knowledge and skills by everyone, not just a select few. The prize will go to those countries that are organized as national learning systems, and where all institutions are organized to learn and to act on what they learn."
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> *Thinking for a living: Education and the Wealth of Nations*, Ray Marshall and Marc Tucker, p. xiii.

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[1] Richard Kazis, *Improving the Transition from School to Work in the United States*, (Washington DC: American Youth Policy Forum Competitiveness Policy Council, Jobs for the Future, 1993): p. 17.

[2] *Text of President's Address to a Joint Session of Congress*, New York Times, February 18, 1993, p. A14.

President Clinton is certainly not the first elected official to push for reforms in education and job training. In 1989 President Bush and the nation's governors agreed to achieve six education goals by the year 2000. Two of those goals are:

> **Goal #3:** American students will leave Grades 4, 8, and 12 having demonstrated competency in challenging subject matter including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.
>
> **Goal #5:** Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

The Secretary's Commission on Achieving Necessary Skills (SCANS)

In response to those goals, the U.S. Secretary of Labor formed the Secretary's Commission on Achieving Necessary Skills (SCANS) in 1990. SCANS was charged with examining how to turn America into a high-performance workplace, and to determine whether young people were capable of meeting the skills that would be demanded by the new work environment.

The Secretary asked the commission to fulfill four main tasks:

- define the skills needed for employment;
- propose acceptable levels of proficiency;
- suggest effective ways to assess proficiency; and
- develop a strategy to disseminate the resulting information to the nation's schools, businesses, and homes.

The SCANS Foundation Skills

After intensive exploration, the commission outlined the skills and competencies that they believed schools should teach to empower America as an effective international competitor. The commission suggested three general foundation skills, which form the basis for other skills and interact closely with the competencies required in a working environment:[3]

> **Basic skills:** reading, writing, mathematics, listening, and speaking;
>
> **Thinking skills:** creative thinking, decision making, problem solving, ability to visualize, knowing how to learn, and reasoning; and
>
> **Personal qualities:** responsibility, self-esteem, sociability, self-management, integrity, and honesty.

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[3] Secretary's Commission on Achieving Necessary Skills, *What Work Requires of Schools: A SCANS Report for America 2000*. (Washington, DC: U.S. Department of Labor, 1991).

The Five SCANS Competencies

The commission also proposed five competencies that interact with foundation skills. Competencies, quite simply, are the skills necessary for success in the workplace. These skills are the *building blocks* for success, says the commission: workers who have these skills can adapt readily to a rapidly changing environment. The SCANS members believe that the competencies they propose are applicable to any employment, "from the shop floor to the executive suite."[4] These competencies include:

Resources: *the ability to identify, organize, plan, and allocate resources.* These resources include time, money, materials, facilities, and human resources;

Interpersonal: *the ability to work with others.* This includes working as a team member, teaching skills to others, serving clients or customers, exercising leadership, negotiating, and working with people of diverse backgrounds;

Information: *the ability to acquire and use information.* This competency includes evaluating information, organizing and maintaining information, interpreting and communicating information, and using computers to process information;

Systems: *the ability to understand and work effectively within complex inter-relationships.* This competency includes understanding social, organizational, and technological systems; monitoring and correcting performance; and improving or designing systems when necessary; and

Technology: *the ability to work with a variety of technologies.* This includes selecting technology appropriate to a task, applying technology to a task, and maintaining and troubleshooting equipment.[5]

> *SCANS members believe that the competencies they propose are applicable to any employment, "from the shop floor to the executive suite."*

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[4] Ibid., p. 6.

[5] Ibid., p. 12.

Examples of SCANS Competencies

The commission is examining numerous occupations to determine the level of proficiency required in each of the competencies. An example of each competency and the proficiency level that might be required of a worker follow. Note how each competency relies heavily on one or more of the three foundation skills (basic, thinking, and interpersonal skills):

Competency	Example of Proficiency Level
Resources	Develop cost estimates and write proposals to justify the expense of replacing kitchen equipment. Develop schedule for equipment delivery to avoid closing restaurant. Read construction blueprints and manufacturers' installation requirements to place and install equipment in the kitchen.
Interpersonal	Participate in team training and problem-solving session with multicultural staff of waiters and waitresses. Focus on upcoming Saturday night when local club has reserved restaurant after midnight for party. Three people cannot work and team has to address the staffing problem and prepare for handling possible complaints about prices, food quality, or service.
Information	Analyze statistical control charts to monitor error rate. Develop, with other team members, a way to bring performance in the production line up to that of best practices in competing plants.
Systems	As part of information analysis above, analyze painting system and suggest how improvements can be made to minimize system downtime and improve paint finish.
Technology	Evaluate three new paint spray guns from the point of view of costs, health and safety, and speed. Vendors describe performance with charts and written specifications. Call vendors' representatives to clarify claims and seek the names of others using their equipment. Call and interview references before preparing a report on the spray guns and making a presentation to management. [6]

These skills should be further broken down, says the commission, to reflect the skills needed by persons at every level of work.

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[6] Ibid., p. XX.

Making SCANS a Working Reality

Simply defining needed skills and competencies is not enough, according to SCANS. Schools must teach them and students must learn them so America can be transformed into a highly skilled, globally competitive country which offers good employment opportunities and high wages. The final SCANS report offers these recommendations: [7]

> "Learning in order to know" should not be separated from "learning in order to do."

- The qualities of high performance that today characterize our most competitive companies must become the standard for the vast majority of our employers, public and private, large and small, local and global.
- The nation's schools must be transformed into high-performance organizations.
- All Americans should be entitled to multiple opportunities to learn SCANS "know-how" sufficient to earn a decent living.

To make this a reality, the commission recommends:

- The nation's school systems should make the SCANS foundation skills and workplace competencies explicit objectives of instruction at all levels.
- Assessment systems should provide students and workers with a resume documenting attainment of SCANS know-how.
- All employers, public and private, should incorporate the SCANS elements into all their human resource development efforts.
- The federal government should continue to bridge the gap between school and the high-performance workplace, by advancing the SCANS agenda.
- Every employer in America should create its own strategic vision around the principles of the high-performance workplace.[8]

Recommendations for School Systems

The SCANS commission recommends that school systems take these steps to implement SCANS goals:

- Teaching should be offered in context. Students should learn content while solving realistic problems. "Learning in order to know" should not be separated from "learning in order to do."
- Improving the match between what work requires and what students are taught requires changing how instruction is delivered and how students learn.
- High performance requires a new system of school administration and assessment.
- The entire community must be involved.[9]

[7] Secretary's Commission on Achieving Necessary Skills. *Learning a Living: A Blueprint for High Performance.* (Washington, DC: U.S. Department of Labor, 1992): p. 5

[8] Ibid.

[9] Ibid.

SCANS recommendations are still too new to be broadly implemented, but many educators, businesses, and other organizations have expressed support and commitment to make the proposals a reality. Kazis (1993) reports attempts at teaching and assessing SCANS competencies in schools in Fort Worth, Texas; Tampa, Florida; and Louisville, Kentucky. Examples of techniques which integrate SCANS competencies with academic content are included in Chapter 8.

Other SCANS Recommendations

The commission also recommends establishing a national system for certifying competency, similar to that used in Germany and England; incorporating SCANS competencies into private sector training programs; reorganizing workplaces into high-performance organizations which reflect SCANS competencies; and restructuring assessment processes to reflect the extent to which students master SCANS competencies.

National Youth Apprenticeship Efforts

SCANS is just one of many federal efforts to create a highly skilled work force. In October 1991, Senators Mark Hatfield (R-Oregon) and Edward Kennedy (D-Massachusetts) introduced the **High Skills, Competitive Workforce Act of 1991** (S. 1790) to implement the recommendations made by the Commission on Skills of the American Workforce in its 1990 report, *America's Choice: High Skills or Low Wages!*. Congressmen Ralph Regula (R-Ohio) and Richard Gephardt (D-Missouri) introduced a companion bill in the U.S. House of Representatives (H.R. 3470). Both propose:

1. performance-based student assessment and occupational standards;
2. creation of school-to-work transition programs, including youth centers, for all students;
3. corporate support for worker training;
4. technical assistance to businesses to move toward high performance work organizations; and
5. development of state and regional training systems.[10]

As of March 1993, at least six bills proposing apprenticeship programs were at various stages in the federal legislative process. Their components were somewhat similar. One example of these bills is the **National Youth Apprenticeship Opportunity Act of 1993** (H.R. 336). This bill was introduced on January 5, 1993 by Marge Roukema (R-New Jersey). Recognizing America's need to compete in a global economy, the bill calls for the establishment of high quality youth apprenticeships beginning in 1994. The program would serve students in Grades 11-12 beginning at age 16. Under this proposal, students would be able to begin on-the-job apprenticeship training while still in high school. Apprentices would be required to complete enough credits at their high schools so that they could receive a high school diploma and pursue a college education, if desired. The program would require one or two years of instruction or training after high school graduation and offer the apprentice an opportunity to obtain an associate degree or mastery of skills certificate. The program could be operated in conjunction with Tech-Prep training.

Federal Laws

The SCANS recommendations and proposed apprenticeship programs will interact with three important pieces of legislation developed to help ensure a skilled work force. These are the *Job Training Partnership Act*, the *Carl D. Perkins Vocational and Applied Technology Education Act*, and the *School-to-Work Opportunities Act of 1993*.

[10] Robert W. Glover and Kenneth W. Tolo, et al., *Bridging the Gap: Implementing School-to-Work Transition in Austin*, (Austin, Texas: LBJ School of Public Affairs, University of Texas at Austin, 1992), p. 11

Job Training Partnership Act (JTPA)

The Job Training Partnership Act (Public Law 97-300) supports school-to-work transition and lifetime learning by providing job training to eligible youths, unskilled adults, low-income individuals, and other persons facing serious barriers to employment. The act is the nation's major funding source for job training and employment programs. It targets low-income youths and adults, including school dropouts age 14 and older.

The U.S. Department of Labor calculates Texas' share of JTPA funding based on a national formula which takes into account the state's number of unemployed and economically disadvantaged persons. Most federal funds are formula-allocated to the state's 35 service delivery areas (SDAs).

1992 amendments to the Job Training Partnership Act specifically target school-to-work transition programs in SDAs. SDAs must use the funds provided under Section 123(a) of the act to provide school-to-work transition activities that increase high school graduation rates or encourage more dropouts to return to educational settings to secure their diplomas or GEDs. The act also provides funding to promote lifelong learning and literacy, especially among persons with low incomes, and to provide statewide coordinated approaches to train, place, and retain women in nontraditional employment.

The amendments also require the state education department to submit to the governor the goals and program specifics of efforts funded with JTPA Section 123 funds, including school-to-work transition programs, literacy and lifetime learning programs, and programs which train women for entry into nontraditional employment.

Carl D. Perkins Vocational and Applied Technology Education Act

In 1990 the U.S. Congress enacted the Carl D. Perkins Vocational and Applied Technology Education Act (Public Law 101-392). The goal of the legislation is to make the U.S. more competitive in the world economy by developing more fully the academic and occupational skills of all segments of the population. The legislation aims to achieve this by providing resources to improve educational programs leading to academic and occupational skill competencies workers need in a technologically advanced society.

The act places high priority on the following:

- meeting the needs of special populations with respect to career and technology education;
- raising the quality of career and technology education programs in schools with high concentrations of poor and low-achieving students;
- the integration of academic and vocational education;
- providing a coherent, nonduplicative sequence of courses leading to both academic and occupational competencies;
- increasing linkages between secondary and postsecondary education; and
- providing instruction in all aspects of the industry that the students are planning to enter.

The act focuses on individuals in greatest need of services. It is designed to stimulate local action and promote stronger connections between schools and employers. The act requires school districts to make vocational and applied technology programs accessible to all eligible persons, including members of special populations. This includes individuals who are disabled, those who are educationally or economically disadvantaged (including foster children), those with limited English proficiency, individuals who participate in programs designed to eliminate sex bias, and individuals incarcerated in correctional institutions.

One of the act's important implications for school-to-work transition is its authorization of national funding for Tech-Prep initiatives. The Perkins Act requires that Tech-Prep systems provide career guidance and assessment services for students before they enter the course sequence, professional development for staff, student support services such as child care and transportation, and equal access for special populations. States are required to give "special consideration" to Tech-Prep initiatives that are developed in consultation with business and industry; address dropout prevention and recovery, especially for members of special populations; offer effective placement services; and provide for transfer to four-year baccalaureate programs. (See Chapters 3, 4, and 7 for more about Tech-Prep.)

While the Carl D. Perkins Act and the Job Training Partnership Act support programs which enhance school-to-work transitions, the United States has often been criticized for failing to provide a systemic national framework to ensure that *all* students have access to adequate work force preparation. The **School-to-Work Opportunities Act of 1993** seeks to develop that systemic national framework by establishing parameters within which each state develops its own system of performance-based education and training programs, called "School-to-Work Opportunities Systems." While not signed into law as of October 1993, the bill appears to be on the fast track for congressional approval.

In Texas, responsibility for developing the system will fall to the newly created Council on Workforce and Economic Competitiveness. (See Chapter 5 for a description of the council.) Central to the bill's intent is building closer training links between schools and workplaces. The legislation appropriates $300 million to the states during fiscal year 1995 as "venture capital" to enact School-to-Work Opportunities programs.

The legislation seeks to:

- establish a training system which offers young Americans access to a performance-based education and training program that will enable them to earn portable credentials; prepare them for a first job in a high-skill, high-wage career; and increase their opportunities for further education;
- transform workplaces into active learning components by making employers full partners in providing high-quality, work-based learning experiences to students;
- use federal funds as venture capital, to underwrite initial costs of planning and establishing statewide "School-to-Work Opportunities Systems";
- promote the formation of local education and training systems that are dedicated to linking the worlds of school and work;
- help students attain high academic and occupational standards;
- build on the success of promising programs, such as Tech-Prep and youth apprenticeships;
- integrate academic and occupational learning, school-based and work-based learning, and develop linkages between secondary and postsecondary education;
- motivate youth to stay in or return to school; and
- further the national education goals set forth in *Goals 2000: Educate America Act*.

Educational programs established under the act must integrate work-based learning and school-based learning and provide students with the opportunity to complete a career major. Programs must contain three components: **work-based learning**, **school-based learning**, and a **connecting activities component**.

The **work-based learning component** must include a planned program of job training and experiences, including skills to be mastered at progressively higher levels. These experiences must be relevant to the student's career major and lead to the award of a skill certificate. The work-based learning component must also include workplace mentoring, instruction in general workplace competencies, and instruction in a variety of elements of an industry. Students must be paid for their work.

The **school-based learning component** must include career exploration and counseling elements which allow students to select or reconsider their goals. Students must make an initial selection of a career major by not later than the beginning of the 11th grade. The curriculum of these programs must be designed to meet the academic standards established under *Goals 2000*, and must help students meet the requirements necessary to earn a skills certificate. Regularly scheduled evaluations must be used to identify academic strengths and weaknesses of students and the need for additional learning opportunities to master core academic skills.

The **connecting activities component** serves as a facilitator between the other two components. This component will provide the means to match students with employers' work-based learning opportunities. It will serve as a liaison among employers, schools, teachers, parents, and students. Connecting activities will provide technical assistance to employers in designing work-based learning components and in training teachers, workplace mentors, and counselors. It will provide the means to help program completers find appropriate jobs, or continue their education or training. The entity responsible for this component must also collect and analyze information about post-program outcomes for participating students, and link youth development activities with employer strategies for upgrading the skills of their workers.

> "... the United States is the only industrialized nation that lacks a comprehensive and coherent system to help its youth acquire knowledge, skills, abilities, and information about and access to the labor market necessary to make an effective transition from school to work or to further education and training..."
>
> *School to Work Opportunities Act of 1993.*

The New Standards Project

Connections between classrooms and the real world are also relevant to student assessment. Standardized assessment practices are often criticized for bearing little relevance to the skills and knowledge students will need when they leave school and enter the working world. Performance-based assessments are widely considered to be more relevant to real-world needs, because they assess a wide range of complex skills and knowledge, while standardized assessments may sometimes test only a student's knowledge of facts.

Part of the philosophy behind the **New Standards Project** is that American schools frequently use tests as sorting devices to determine what students do and do not know. This creates student "winners" and "losers." Students may give up on school if they "lose" frequently. The New Standards Project operates on a different philosophy: rather than determining grades based on a one-time-only test, the proposed examinations would operate rather like the "merit badge" system used by scouting organizations. Students could accumulate "credits" as they demonstrate mastery of tasks.[11]

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[11] Ray Marshall and Marc Tucker, *Thinking for a Living: Education and the Wealth of Nations.* (New York, New York: BasicBooks, a Division of Harper Collins Publishers, 1992).

In 1990, the National Center on Education and the Economy, which published ***America's Choice: High Skills or Low Wages!,*** joined forces with the Learning Research and Development Center at the University of Pittsburgh to design a national system of performance-based student evaluations leading to a Certificate of Initial Mastery. Seventeen states, including Texas, have voluntarily joined the design effort. The evaluations would consist of three components: performance examinations, assessments of student portfolios, and assessments of student projects. Participants propose to develop a variety of examinations, each benchmarked to the same high national standards. Schools could choose which examinations they would use; however, students would have to meet the same high national standards to complete the examinations. Students could complete the evaluations within their own time frame, rather than at specified dates and times. The project's goal is for most students to complete the examinations by age 16, and be awarded a Certificate of Initial Mastery. However, students who need more time to complete the evaluations could do so without penalty. After achieving a Certificate of Initial Mastery, students could pursue further education or technical training. The project team aims to complete the mathematics and language assessments by the 1993-94 school year.

Jobs for America's Graduates

First piloted in Delaware in 1979, this nationwide program helps young people in 18 states stay in high school and make successful school-to-work transitions. Program oversight is provided by a non-profit organization headquartered in Alexandria, Virginia, **Jobs for America's Graduates (JAG)**. The program is geared to meet the needs of youths in high-risk situations. It involves about 300 high schools and 21,000 students. Students are divided into groups of 40, and a job specialist is assigned to each group, The specialist must devote at least 60 hours to each student during the school year in career-related activities. The activities usually involve the 37 workplace competencies developed by JAG and approved by the U.S. Department of Labor. Students are tested on the 37 competencies upon entry to and exit from the program.

During their senior year, JAG participants are given assistance in finding jobs. After graduating, they are monitored for nine months to assess job loss, advancement, changes, and pursuit of higher education. During the 1989-90 school year, about 90 percent of the 20,000 JAG participants either graduated from high school or received a GED certificate. Seventy-eight percent found work or pursued higher education. Of the JAG graduates who were employed, 64 percent had full-time jobs. Twenty-nine percent pursued postsecondary education.[12]

Texas Policy and Initiatives

While federal programs and legislation are important, successful school-to-work transition initiatives must be tailored to the needs of individual communities, states, and youths that they serve. Thus, initiatives at the state and local levels are especially important. The next chapter explores Texas policies and initiatives.

[12] Glover and Tolo et al., p 14

Chapter 5

Texas School-to-Work Policy and Initiatives

Texas, like the rest of the nation, has long operated many programs designed to provide learners with workplace skills. In fact, Texas operates 21 separately funded and administered education, job training, and employment programs. These programs are administered by seven state agencies. The Texas system, like that of the rest of nation, has been marked by the lack of a systemic process for preparing learners to enter or advance in the workplace. While state agencies often coordinate efforts for the benefit of current and future workers, no one entity has been assigned to unify and coordinate these efforts. The **Texas Council on Workforce and Economic Competitive,** created by Senate Bill 642, aims to provide that unifying structure.

> *"Our goal is to graduate students and train adults to be job ready. If we can turn our educational system around, reduce dropout rates, and decrease illiteracy, then every employer in the country, in the world, will know that the Texas work force is the best trained and skilled in the world."*
>
> Ann Richards, Governor of Texas

Texas Council on Workforce and Economic Competitiveness

Senate Bill 642, passed by the 73rd Texas Legislature in the spring of 1993, intends to promote the development of a highly skilled Texas work force by providing systematic coordination of the state's work force development efforts. The legislation created local work force development boards and established the Texas Council on Workforce and Economic Competitiveness (TCWEC) as a new state agency. This 45-member council will seek to promote more effective school- and training-to-work transition processes by unifying more than 21 separately funded and administered education, job training, and employment programs operated by seven state agencies. The intended result will be a unified job training and program delivery system. The council has responsibility for developing the youth training system outlined in the federal School-to-Work Opportunities Act of 1993, which was described in Chapter 4. TCWEC has formed alliances with the National Center on Education and the Economy and Jobs for the Future, which are providing technical assistance in implementing the School-to-Work Opportunities Act and Texas House Bill 367, the **Workforce Development Initiative for Youth**, which is described later in this chapter.

Among the council's responsibilities are to:

- promote the development of a well-educated, highly skilled work force through literacy, adult basic education, community education, apprenticeships, and occupational skills education and training programs;
- serve as an advocate for an integrated work force development system to provide quality services which address the needs of Texas businesses and workers;
- promote and assist in the development of an industry-based skills standards and certification system for occupations requiring less than baccalaureate-level education and training;
- recommend to the governor the components of a school- and training-to-work transition process;
- develop a local and state program delivery system serving all Texans;
- implement a statewide system for evaluating the effectiveness of all Texas work force development programs; and
- establish and operate a comprehensive labor market information system that serves employers, students, workers, and state and local planning organizations.[1]

The council has important implications for Texas school-to-work transitions because it has the potential to create a comprehensive and cohesive education and service delivery system that can greatly enhance the work force skills and readiness of Texas learners. The task facing the council is complex. The rest of this chapter offers a look at that complexity, as it examines some of the state's efforts to prepare its learners for life in the 21st century.

Creating "Smart Jobs" for Texas

Texas Governor Ann Richards has made education, stabilizing the state's economy, and improving the skills of its work force a priority for her administration. One of the most important programs she has mandated is the "Smart Jobs" Plan. "Smart Jobs" aims to ensure a nationally and internationally competitive Texas work force by making sure that all Texans receive the education and training necessary for high-skill jobs in the 21st century. The idea is that high skills bring high wages, attract high-paying jobs to Texas, and boost the state's economy and quality of life. "Our goal," said Governor Richards, "is to graduate students and train adults to be job ready. If we can turn our educational system around, reduce dropout rates, and decrease illiteracy, then every employer in the country, in the world, will know that the Texas work force is the best trained and skilled in the world."[2]

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[1] Texas Senator Rodney Ellis, Council on Workforce Development and Economic Competitiveness, SB 642

[2] Ann W. Richards, "The New Texas Prosperity." Text of Governor Ann W. Richards' remarks to the Texas Conference on Small Business, October 15, 1991, p. 6

The Smart Jobs Plan is a comprehensive strategy for wise use of the state's existing career and technical education, job training, adult education, and other program funds to implement a "smart jobs" approach in Texas. Several state agencies are cooperating to develop this plan, including the Texas Education Agency, Texas Department of Commerce, Texas Higher Education Coordinating Board, Texas Department of Human Services, Texas Employment Commission, and Texas Department of Criminal Justice.

Plans for implementing "Smart Jobs" include the following:

- establishing an advisory group involving partnership agencies;
- convening business, industry, and labor leaders to determine the skill requirements of occupations in Texas;
- conducting appropriate research, analysis, and verification steps to identify and prioritize key industries and occupations critical to the economic growth of the state;
- identifying and establishing industry occupation standards according to the world's highest standards;
- establishing a method for validation keyed to regional and local labor markets and employers;
- establishing methods of implementing industry standards in Texas;
- establishing a method of certifying individuals who complete training;
- establishing a method of guaranteeing the skill level of graduates or those who complete training in Texas; and
- establishing a strong connection between Texas training, skill standards, and skill guarantee efforts and the Texas Department of Commerce's business development expansion, retention, and recruitment efforts.[3]

The "Smart Jobs Fund"[4]

In February 1993 the 73rd Texas Legislature established the "Smart Jobs Fund" to assist Texas businesses in training the work force of the future. One program goal is to enhance the competitive position of Texas businesses by improving the skills of Texas workers and increasing the number of high-skills, high-paying jobs available in the state. Matching grants will be given to employers who want to train new workers or upgrade the skills of current employees.

Another goal of the Smart Jobs Fund is to provide an incentive for businesses to relocate to Texas or expand current operations. The fund will also offer assistance to help businesses upgrade their technology.

The program is financed by creating a fund using one-tenth of one percent of the state's unemployment compensation tax. Funds available for distribution should amount to about $50 million annually. The Texas Department of Commerce provides program oversight.

Texas operates 21 separately funded and administered education, job training, and employment programs. These programs are administered by seven state agencies.

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[3] Texas Department of Commerce, "Texas Smart Jobs Plan," *FYI* (Newsletter), (Austin, Texas: Texas Department of Commerce, January 1992).

[4] Texas Research League, "Employee Training Survey," *Analysis* (Newsletter), Austin, Texas: Texas Research League, November 1992): p. 1.

The Texas Skills Development Program

One crucial part of the "Smart Jobs Plan" is the Texas Skills Development Program (TSDP), which is the responsibility of the Texas Department of Commerce.The department was charged by the governor to "establish a skills development program that will establish employability standards with the help of business and industry." A key element in this plan is developing a methodology through which national standards can be adapted to Texas and validated regionally within Texas. The mission of the Texas Skills Development Program is to develop an education and work force training system that has the ability to measure skill levels and ensure that workers have the skills needed by business and industry to compete in a global economy.

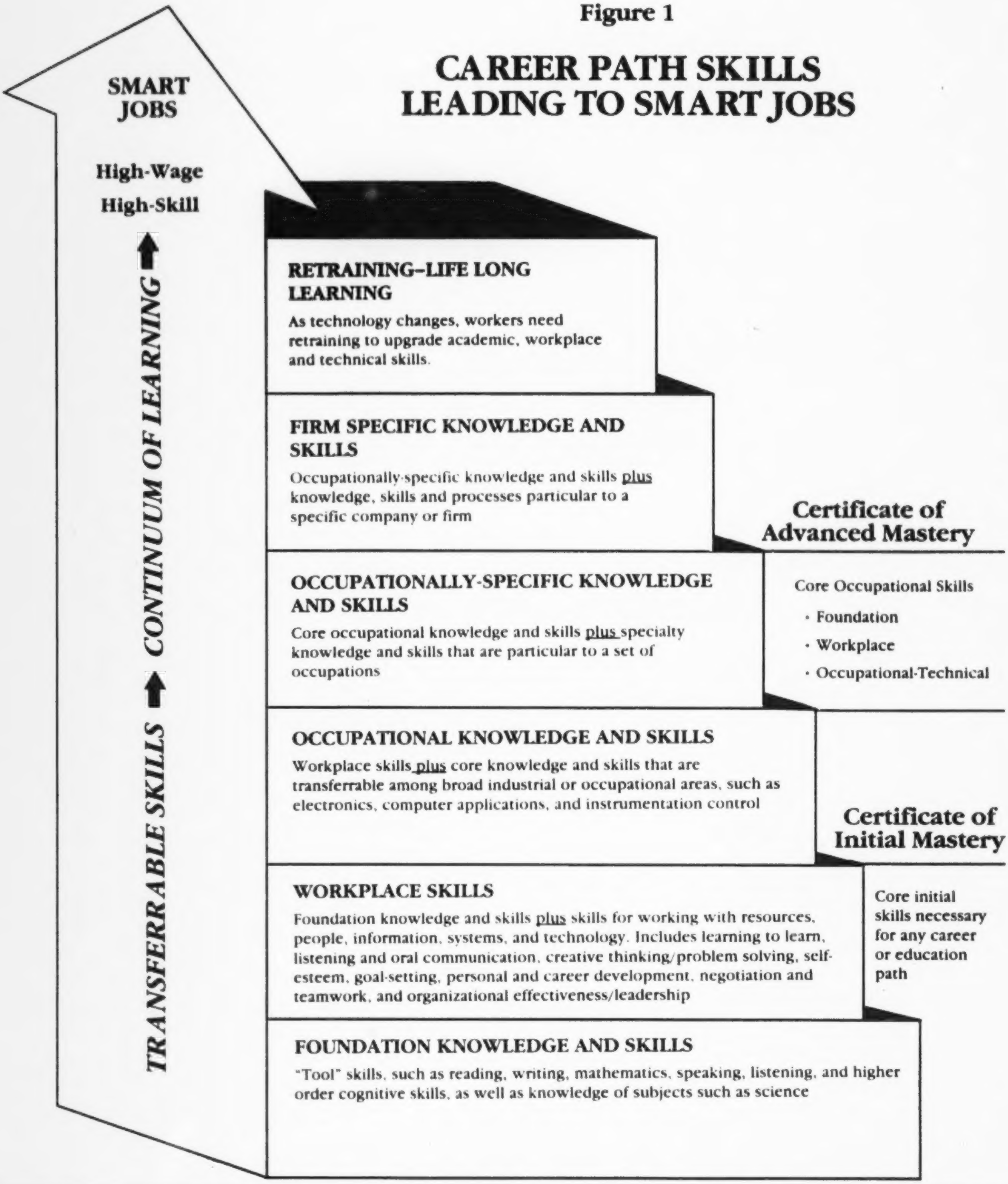
The main mandates for the Texas Skills Development Program are to:

- identify industry-driven and validated skill standards developed by industry-recognized associations, foundations, and groups;
- disseminate and encourage the use of skill standards by business, industry, and education;
- promote the upgrading of vocational-technical curricula at all educational levels based on skill standards; and
- encourage and assist in the development of a criterion-referenced certification process for students, graduates, workers, and training institutions.

The career path skills identified by the Texas Department of Commerce as leading to "Smart Jobs" are illustrated in Figure 1.

Figure 1

CAREER PATH SKILLS LEADING TO SMART JOBS



RETRAINING–LIFE LONG LEARNING

As technology changes, workers need retraining to upgrade academic, workplace and technical skills.

FIRM SPECIFIC KNOWLEDGE AND SKILLS

Occupationally-specific knowledge and skills plus knowledge, skills and processes particular to a specific company or firm

OCCUPATIONALLY-SPECIFIC KNOWLEDGE AND SKILLS

Core occupational knowledge and skills plus specialty knowledge and skills that are particular to a set of occupations

OCCUPATIONAL KNOWLEDGE AND SKILLS

Workplace skills plus core knowledge and skills that are transferrable among broad industrial or occupational areas, such as electronics, computer applications, and instrumentation control

WORKPLACE SKILLS

Foundation knowledge and skills plus skills for working with resources, people, information, systems, and technology. Includes learning to learn, listening and oral communication, creative thinking/problem solving, self-esteem, goal-setting, personal and career development, negotiation and teamwork, and organizational effectiveness/leadership

FOUNDATION KNOWLEDGE AND SKILLS

"Tool" skills, such as reading, writing, mathematics, speaking, listening, and higher order cognitive skills, as well as knowledge of subjects such as science

Certificate of Advanced Mastery

Core Occupational Skills
- Foundation
- Workplace
- Occupational-Technical

Certificate of Initial Mastery

Core initial skills necessary for any career or education path

Skill advancement must be recognized as a continuum of learning throughout life. Core skills should be transferrable across occupational areas. While this chart delineates the various types of necessary skills, it is important to acknowledge that core skills should be taught in an integrated fashion and core skill levels must advance as the student or worker progresses on his/her education career path.

Source: Texas Department of Commerce

Quality Work Force Planning Committees

Regional work force and occupational planning is crucial to creating a comprehensive training system. Quality Work Force Planning Committees provide that function, and so are a critical facet of Texas' work force preparation efforts. In 1987 the Texas Education Agency, Texas Higher Education Coordinating Board, and the Texas Department of Commerce formed a tri-agency partnership to support the development of a skilled and educated Texas work force. Building upon demonstration projects and research, in 1990 these agencies established 24 Quality Work Force Planning regions in Texas. Each region has formed a Quality Work Force Planning Committee with representation from business, industry, and education. (A list of contacts for these committees appears in the appendix.)

These committees are charged with identifying regional program priorities based on projected employment growth for targeted occupations in key industries, establishing priorities for training programs that meet the employment needs of each region, and implementing service delivery plans to meet those needs. The committees coordinate their activities closely with business/ industry, schools, and other community representatives to ensure that Texas students are prepared for employment in the 21st century. The committees also coordinate activities with Tech-Prep consortia. These consortia use labor market information about targeted occupations provided by the committees as the basis for curriculum development.

The State Occupational Information Coordinating Committee and SOCRATES

Quality Work Force Planning Committees receive assistance from the **State Occupational Information Coordinating Committee.** SOICC is composed of representatives from the Texas Education Agency, Texas Department of Commerce, Texas Employment Commission, Texas Higher Education Coordinating Board, and Texas Rehabilitation Commission. The committee has developed a variety of resources and materials to provide labor market information to teachers, counselors, students, business and industry, and the general public. The committee supports the efforts of Quality Work Force Planning Committees in part through the development of a software and training system called **Standardized Occupational Components for Regional Analysis and Trends in Employment System (SOCRATES).** The Texas Department of Commerce sponsored the development of the software.

The **SOCRATES** project, unique to Texas, was designed to assist Quality Work Force Planning Committees in analyzing the labor market dynamics of each planning region. It offers users an automated tool for planning the labor and education needs of an area. The software is designed to help users identify key occupations in each area, the tasks and duties associated with each occupation, and includes a directory showing where related programs are taught within each region. Each of the 24 planning regions is encouraged to collect local information on occupational wages, updated employer listings, changes in training programs, and analysis of industry projections.

Education Efforts

The Texas Education Agency, State Board of Education, Higher Education Coordinating Board, and other agencies have responsibility for developing and overseeing the state's education efforts. Following are descriptions of efforts which impact student work force preparedness.

The State Board of Education Task Force on High School Education

Ensuring that students have the tools to lead successful lives after they leave high school is a major priority for Texas public education. In its 1992 report, *One Student at a Time,* the State Board of Education Task Force on High School Education examined the changing demands of today's environment, called for greater excellence and equity in the education of *all* Texas youth, and said that the skill levels of Texas workers must improve in order for the state to compete effectively in the high-skills work environment. The task force recommended comprehensive changes in how schools are structured. Among their recommendations is the creation of individual lesson plans (IEPs) for all students, beginning in middle school. These IEPs would be based on students' post-high school goals. Schools would monitor these IEPs throughout a student's middle school and high school career.

The task force recommends the following actions:

Campus-Level Actions:

- collaborate with parents to develop, monitor, and adjust an individual education plan anchored in explicit postsecondary goals valued by the student;
- include the development and monitoring of individual education plans in the regularly scheduled advisory activities of all educational staff;
- develop intramural magnet programs and inter-school exchange arrangements to provide learning opportunities comparable to the diverse interests and talents of students; and
- provide teachers time to collaboratively plan integrated, cross-curricular learning opportunities for students.

> "More than any other country in the world, the United States believes that natural ability, rather than effort, explains achievement. The tragedy is that we communicate to millions of students every year, especially to low-income and minority students, that we do not believe that they have what it takes to learn. They then live up to our expectations . . ."

America's Choice: High Skills or Low Wages!, National Center on Education and the Economy, pp. 3-4.

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[5] Texas Education Agency, *One Student at a Time,* (Austin, Texas: Texas Education Agency, January 1992), p. 40.

Classroom-Level Actions:

- ground the student's learning opportunities in the student's individual education plan;
- use the curriculum to build learning opportunities that enable students to succeed in real world tasks;
- employ curriculum materials, instructional practices, and learning contexts appropriate to the student's culture, individual learning style, and postsecondary goals;
- use relevant authentic assessments to direct instruction and support continuous progress; and
- teach in context, so that learning to know does not become separated from learning to do.[5]

New Standards Project

Many assessment practices commonly used in schools—such as multiple choice assessments which measure students' knowledge of facts—have been criticized as detrimental to "real world" learning. It is more appropriate, say researchers, to use ***authentic assessments***, which measure a multitude of skills. Authentic assessment is central to Texas' involvement in the **New Standards Project**, which is administered by the National Center on Education and the Economy and the Learning Development Laboratory at the University of Pittsburgh. One goal of the project is to develop performance-based assessments in the form of projects that require students to apply academic principles and knowledge. The New Standards Project will culminate in a series of individual and group project assessments.[6] (See Chapter 4 for more information about the New Standards Project.)

This shift toward performance-based assessment will have an important impact on Texas school-to-work transitions. Standardized assessments, unless very carefully contructed, usually measure two things: students' knowledge of facts, and how well they perform on standardized tests. In the workplace, employees are valued according to how well they perform tasks, and usually not according to how many facts they know and can recall. By focusing assessment processes on performance-based measures rather than on standardized, multiple-choice tests, schools help students learn the importance of high performance on tasks, and can better assess students' skills. The focus of instruction shifts away from simply *teaching* facts, to teaching students how to *apply* those facts to real-world situations.

> *"The apologists say it is unfair to compare (test scores in other countries) to ours because we must educate a diverse population, while their student bodies are homogeneous. This is the most disturbing excuse of all. Do we really believe that Black, Hispanic and immigrant children can't be educated to the same standard as Whites? Whites are a declining percentage of our youth. If we bow to this excuse, we are giving up on America."*
>
> ***America's Choice: High Skills or Low Wages!,***
> National Center on Education and the Economy, p. 13.

Glover and Tolo et al. (1993) verify the importance of assessment in effective school-to-work transition efforts. The New Standards Project has important implications for school-to-work transitions, according to the researchers. "First," the researchers say, "the new assessments offer hope for improving instruction in the foundation skills that students carry into the workplace. Second, the performance-based project approach to assessment opens possibilities of using workplace applications and engaging industry representatives in the process of student assessment."[7]

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[6] Robert W. Glover and Kenneth W. Tolo, et al., ***Bridging the Gap: Implementing School-to-Work Transition in Austin.*** (Austin, Texas: Lyndon Baines Johnson School of Public Affairs, The University of Texas at Austin, 1993), p. 40

[7] Ibid.

The Master Plan for Career and Technical Education

School-to-work transition efforts are central to the *Master Plan for Career and Technical Education*, the result of joint efforts between the Texas Education Agency, Texas Department of Commerce, and Higher Education Coordinating Board. The goals and objectives of the new plan mirror closely the principles outlined in this document on school-to-work transition. Rather than making *schools* solely responsible for career and technical education, the new master plan recognizes the importance for extensive coordination between schools, business and industry, planning bodies, and higher education.

Published in 1993, the *Master Plan for Career and Technical Education* addresses the need for comprehensive school-to-work-transition preparation by refocusing the state's goals for career and technical education. The plan was developed by a task force which included representatives from Texas Education Agency, Texas Department of Commerce, Texas Higher Education Coordinating Board, public schools, community and technical colleges, business and industry, and labor. Recommendations solicited at hearings held across the state were also incorporated. Implementation of the plan will be the responsibility of all three agencies.

The plan is built around five goals which aim to ensure an excellent career and technical education for all Texans, and secure Texas' place in the global economy. Each of the three agencies has developed objectives and strategies to support the goals. The goals for public education are:

Goal I: ***Students and adult learners:*** Meet the needs of Texans for world-class education and training, ensuring that all learners acquire the knowledge and skill necessary for success in the workplace and society.

Goal II: ***Business, industry, and labor:*** Meet the needs of Texas business, industry, and labor for an educated, skilled, and globally competitive work force.

Goal III: ***Faculty and staff:*** Meet the professional development needs of Texas faculty and staff to ensure successful student and adult learner outcomes for all public and training institutions.

Goal IV: ***State communications:*** Meet the needs of Texans for comprehensive information about state labor markets, career and technical education, and economic development issues.

Goal V: ***Adequate resources:*** Meet the needs of career and technical education and provide for adequate resources to develop an educated and skilled work force.[8]

The introduction to *The Master Plan for Career and Technical Education* is reproduced in the appendix of this document.

Tech-Prep Systems

Tech-Prep is an important element of Texas career and technical education. Tech-Prep in Texas is viewed as a *process* or *system*, rather than as a *program*, because of its comprehensive and coherent nature. Tech-Prep prepares students for careers in such areas as applied science, engineering technology, aquaculture, mechanical arts, industrial arts or trades, agriculture, health, business, or other emerging occupations. At the national level, legislation requires that Tech-Prep offer a nonduplicative course sequence which combines the last two years of high school with two years of further study in a community college. The programs target students in general education, challenging them with courses that are often more difficult than those in the regular curriculum. Texas Tech-Prep policy exceeds national standards by requiring four years of high school training followed by at least two years of postsecondary training.

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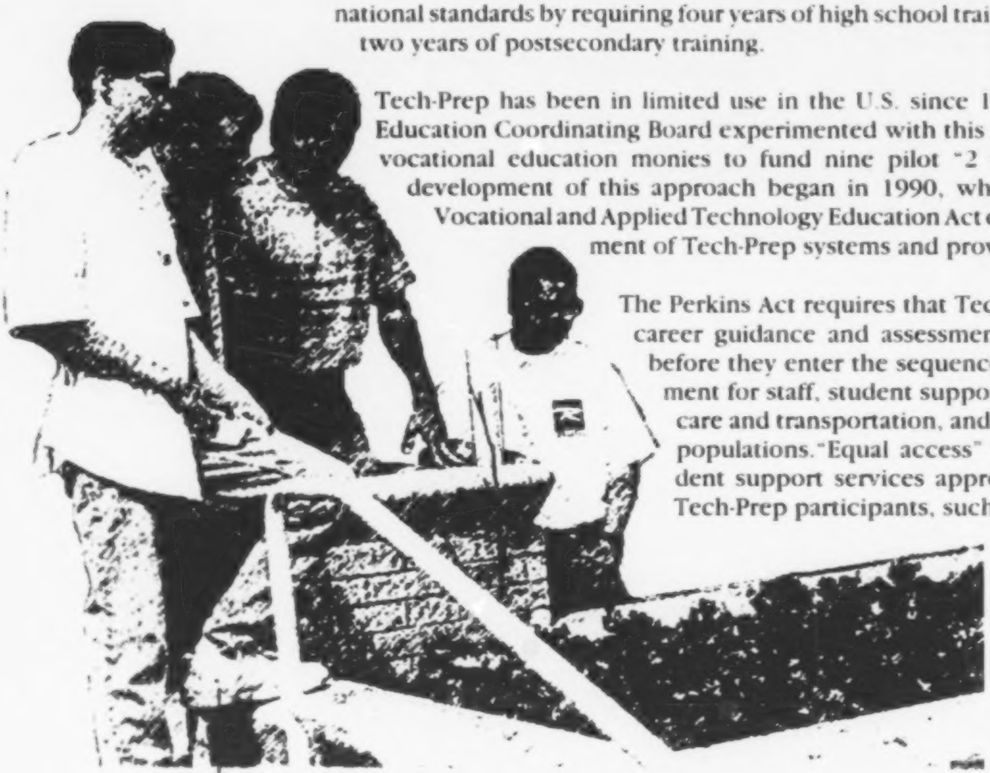
[8] Texas Education Agency. *The Master Plan for Career and Technical Education*. (Austin, Texas May 1993)



Tech-Prep has been in limited use in the U.S. since 1985. The Texas Higher Education Coordinating Board experimented with this approach, using federal vocational education monies to fund nine pilot "2 + 2" sites. Widespread development of this approach began in 1990, when the Carl D. Perkins Vocational and Applied Technology Education Act encouraged the development of Tech-Prep systems and provided federal funding.

The Perkins Act requires that Tech-Prep systems provide career guidance and assessment services for students before they enter the sequence, professional development for staff, student support services such as child care and transportation, and equal access for special populations. "Equal access" includes providing student support services appropriate to the needs of Tech-Prep participants, such as child care and transportation. States are required to give "special consideration" to Tech-Prep efforts that are developed in consultation with business and industry; address dropout prevention and recovery, especially for members of special populations; offer effective placement services; and provide for transfer to four-year baccalaureate programs.

Tech-Prep runs parallel to college preparatory curricula, and offers a sequence of courses which prepare students for a two-year technical degree program in a community college or entry into an apprenticeship program. Tech-Prep sequences lead to an associate degree or a certificate of achievement.

Tech-Prep systems are operated by consortia of businesses, secondary schools and institutions of higher learning. Texas uses its 24 Quality Work Force Planning regions as the basis for these consortia, with one additional consortium. (Refer to the resource appendix of this document for a list of Texas consortia.)

Tech-Prep is viewed in Texas as an important system for school restructuring, with heavy emphasis on staff development and effective counseling. Texas requirements for Tech-Prep exceed federal mandates in several respects. Consortia are asked to devise sequences of study that begin in ninth grade, rather than eleventh grade, and continue through two years of postsecondary training. These sequences must integrate both academic and workplace learning experiences, while also incorporating college-preparatory coursework, critical thinking skills, and the skills outlined by the Secretary's Commission on Necessary Skills (SCANS). Tech-Prep systems must also be linked to opportunities for advanced technical skills training or baccalaureate study.

As of April 1993, the Texas Higher Education Coordinating Board and the Texas Education Agency had recognized more than 100 programs which meet Texas' high standards for Tech-Prep curricula. See Chapters 3, 4, and 7 for more about Tech-Prep.

Vocational and Academic Integration

Texas is exploring other ways to link academic and career training. The Texas Education Agency provided funding in 1992-1993 to 13 pilot schools which are exploring ways to integrate vocational and academic education. The **Educational Development and Training Center** at East Texas State University is providing project oversight. The pilot sites are Abilene Independent School District (ISD), Austin ISD, Boles Home ISD, Cooper ISD, Cumby ISD, Greenville ISD, Mansfield ISD, Pampa ISD, Round Rock ISD, Schleicher ISD, Socorro ISD, Tyler ISD, and Wilmer-Hutchins ISD. The program focuses on making course materials relevant to the "real world." Each school determines its program and direction, as "real world" realities vary greatly from town to town. Strategies focus on a rigorous integrated curriculum and using team-teaching methods to reach all students. SCANS skills and competencies are emphasized.

> "... cognitive science teaches that people learn skills best when they are taught in meaningful contexts and that people are more likely to use knowledge appropriately in applied settings if they acquire it in such settings."
>
> Secretary's Commission on Achieving Necessary Skills

The **Southern Regional Education Board (SREB)** has been active since 1988 in developing curricula which integrate academic and vocational curriculum. (See Chapter 3.) The Texas Education Agency, a member of the SREB, has selected 12 Texas pilot sites which will implement the SREB "High Schools That Work" model during the 1993-1994 school year using Carl Perkins funds. The Texas "High Schools That Work" pilot sites are Central Senior High School, Beaumont ISD; Elgin High School, Elgin ISD; Fabens High School, Fabens ISD; LBJ High School, Austin ISD; Lexington High School, Lexington ISD; Los Fresnos High School, Los Fresnos CISD; Louis Fox Technical High School, San Antonio ISD; North Side High School, Fort Worth ISD; Tomball High School, Tomball ISD; University High School, Waco ISD; West Orange-Stark High School, West Orange-Cove CISD; and Woodville High School, Woodville ISD.

Committee on Student Learning

The Committee on Student Learning was formed in 1991 by the 72nd Texas Legislature (House Bill 2885) to make recommendations to the Legislative Education Board and the State Board of Education on a variety of factors affecting student learning. This 16-member committee reported directly to the Legislative Education Board. It was chaired by the Commissioner of Education, and included classroom teachers from primary and secondary schools, a member of the Higher Education Coordinating Board, school administrators, and representatives from the State Board of Education and professional education organizations. The committee was charged with the following:

- to identify the knowledge and skills essential for elementary and secondary students;
- to develop a statewide assessment program for elementary students that is primarily performance-based, uses a variety of methodologies to determine mastery of essential skills and knowledge, and is designed to assess students in at least two elementary grade levels;
- to develop a statewide assessment program for secondary students that is primarily performance-based, uses a variety of methodologies to determine mastery of essential skills and knowledge, and provides criteria for a certificate of initial mastery;
- to recommend appropriate uses by public schools and school districts of the results of the statewide assessment program;

- to recommend changes to state laws, school district policies, budget procedures, and other factors that inhibit schools from adopting strategies designed to ensure student attainment of the essential knowledge and skills;
- to recommend fair and accurate indicators to measure the level of student achievement in public schools and school districts, and measures that would assist schools and districts in which student learning is below expected levels;
- to recommend modifications in college entrance requirements that inhibit public schools from adopting strategies that are designed to ensure that students achieve the essential knowledge and skills;
- to identify the time, support, and resources that are necessary for schools to achieve the essential knowledge and skills; and
- to create recommendations for replacing course or class credit requirements with requirements for core competencies, including critical thinking skills, for the purpose of improving and evaluating student performance.[9]

During 1992-1993, the committee focused on reviewing research and discussing issues relating to essential skills and knowledge, applied learning, results-driven education, student assessment, successful practices, and current Texas educational policies and programs. It recommended comprehensive assessments at Grades 4, 8, and 10. Mastery of the Grade 10 assessment would serve as a condition for exiting high school with a diploma. The committee also developed a public process to determine what students should know and be able to do when they graduate from high school. The public process, "Raising Expectations to Meet Real-World Needs," is profiled below.

Raising Expectations to Meet Real-World Needs

An outgrowth of the work of the Committee of Student Learning, this project seeks to inform the public of the global changes that are affecting learners; give the general public and private sector a chance to discuss the implications of these changes; and align what students learn in school, what they are tested on, and how they are taught in order to focus on what they need to know and be able to do to succeed in the real world. The project has two components: **Real-World Forums** and the **State Panel on Student Skills and Knowledge**.

> "Learning takes place when learners regard what one needs to know as relevant to their lives; when they feel that their teachers are committed to the student's success; when the institutional environment allows for differences in learning methods and styles and is in harmony with the diverse needs and interests of the learner."
>
> *The Forgotten Half*

Real-World Forums, which were held in October and November of 1993, were designed to gather information about what the public feels students need to learn and be able to do to succeed in the real world. Forums were scheduled throughout the state, so that all Texans had an opportunity to participate. Participants viewed a video which describes the future of Texas and the world. Then they discussed the implications of this information for the graduates of Texas public schools. Participants were asked to describe the skills and knowledge that they feel today's students need for tomorrow's world. The resulting discussions will be analyzed at the regional level, and summaries sent to the State Panel on Student Skills and Knowledge. Based on public comment, the panel will develop recommendations on essential skills and knowledge. The summaries and recommendations from the panel will be submitted to the State Board of Education in Spring 1994, and will be used to guide state policy about curriculum, student assessment, and instruction.

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[9] Texas Education Agency, *Report of the Committee on Student Learning* (Austin, Texas: Texas Education Agency, 1993).

The State Panel on Student Skills and Knowledge was formed to review the opinions of the thousands of Texans who participated in the Real World Forums. The panel is composed of 75 representatives of business, industry and labor, higher education, legislative staff, community groups, civic organizations, public education, and parents. This panel will participate and solicit participation in the Real World Forums, analyze the public's views of essential skills, and recommend the essential skills and knowledge to the State Board of Education

Transition Services for Participants in Special Education

School-to-work transition services are required for all special education participants in Texas. The State Board of Education (SBOE) Rules for Special Education, 19 TAC §89.201(b), mandate that all students participating in special education programs receive services which will enable them to make the transition from school to adult life, helping them achieve maximum independence and integration into the community. The rules define transitional services as "services, both of short and extended duration, that enable persons with disabilities to live in the community, participate in work and other meaningful activities, have access to appropriate medical, mental health and nonmedical support services, and engage in satisfying social interactions."

Students who are eligible for special education services include those who are determined by a licensed medical professional to have one of the following conditions:

- orthopedic handicap;
- serious health impairment;
- auditory handicap;
- visual handicap;
- deaf and blind;
- mental retardation;
- emotionally disturbed;
- learning disabled;
- speech handicap;
- autism; or
- multiple handicaps.[10]

> "We teach collaborative problem-solving. In school that's called cheating."
>
> Edward Bales, Chief Liaison to Schools and Universities for Motorola

Transition planning must begin by age 16 for each student. Planning must be initiated at the school district level, and always includes the parents or guardian. To the extent possible, the following persons must be involved in the planning process: representatives from general, special, and vocational education; and representatives of appropriate state agencies. Desired transition outcomes are planned based on current information about each student's knowledge, skills, abilities, and preferences. The planning group identifies the support services that each student will need as an adult in order to attain the desired transition outcomes. The planners determine how and when the services will be delivered. An Individual Transition Plan (ITP) is then devised for each student. The plan identifies employment, education, independent living, recreation, social, and leisure options.

Comprehensive Developmental Guidance and Counseling Program

This program provides systematic guidance to all students through a guidance curriculum which addresses motivation to achieve, decision making, goal setting, planning and problem solving skills, and interpersonal and cross cultural effectiveness. The Individual Planning component assists students in monitoring and understanding their own educational and career development, thus facilitating healthy transitions to the work force.

[10] Texas State Board of Education. *State Board of Education. Rules for Special Education.* 19 TAC §89.201(b)

[11] John Sharp. *Against the Grain: High-Quality Low-Cost Government for Texas.* (Austin, Texas: Texas Comptroller of Public Accounts, 1993) p. 112

Texas Comptroller John Sharp's Proposals

State Comptroller John Sharp, in a January 1993 performance review of state government, further promoted Texas school-to-work transition efforts by calling for the establishment of a youth apprenticeship program and a Texas Youth Corps. Sharp estimates that the apprenticeship program would cost $5.1 million per year, while the Youth Corps would cost $8.5 million each year.[11]

The **Texas Youth Corps** would offer a way for youths to acquire work skills and locate job opportunities. If Sharp's Texas Youth Corps becomes a reality, it would involve unemployed young people age 16 through 24 in service projects. Young people would participate in such projects as making public facilities available to the disabled, serving in hospitals or nursing homes, or working on conservation or housing projects. The program would provide participants with work skills, educational and job opportunities, improved self-esteem, life skills, and the satisfaction of community involvement. More than 40 cities and 18 states have already established youth service corps.[12]

The Workforce Development Initiative for Youth

Legislators acted on Sharp's apprenticeship proposal almost immediately. Legislation to establish a Texas youth apprenticeship program and improve the transition of youths from school to work was approved by the 73rd Texas Legislature in the spring of 1993. The **Workforce Development Initiative for Youth** (Senate Bill 367) established two programs which will improve the work force preparedness of Texas youths. The legislation established two pilot programs: a **Career Pathways Pilot Program** and a **Youth Apprenticeship Grant Pilot Program**.

The **Career Pathways Program** will help secondary school students enter the work force. The program will be open to students who have successfully completed the 10th grade. Participants would be guided "through a learning process that integrates school and work and high school with the first few years of postsecondary learning," says the legislation.[13]

The **Youth Apprenticeship Grant Pilot Program** will "provide high-quality supervised learning opportunities for students at the workplace of a participating employer."[14] The program will be based on strong employer involvement and commitment. It will serve 11th and 12th graders and continue through the "first few years" of postsecondary learning. Students will be limited to a four-year participation.

The legislation calls for both pilot programs to foster interactive, team-based learning in the classroom and workplace; include curricula on all aspects of the industry in which the student is training; use competency-based measures for evaluating student progress; place strong emphasis on occupational safety; provide both academic and occupational credentials; provide access and support to groups, including women, minority group members, and persons with disabilities, and address issues presented by diversity in society and the workplace; and involve industries and occupations that offer entry-level jobs with good opportunities for career advancement into high-skill, high-wage jobs. The legislation also created a 19-member design committee to oversee development of the programs, build public awareness, and advise the governor and legislature about the plan's implementation.

Actions in Other States

Texas is not alone in its efforts to improve youths' preparation for life after school. The next chapter explores school-to-work transition efforts in other states.

[12] Sharp, p. 109

[13] Texas Senator Rodney Ellis, Workforce Development Initiative for Youth, SB 367, April 1994, p. 4

[14] Ibid., p. 3

Chapter 6

School-to-Work Policy and Initiatives in Other States

Many states are creating programs which address the necessity for more effective school-to-work transitions. According to the William T. Grant Foundation (1991) these initiatives generally fall into nine categories:[1]

- student apprenticeships;
- school-to-employment transitions;
- human resource investment planning bodies;
- youth community service;
- technical preparation (Tech-Prep);
- school/business partnerships;
- alternative learning centers;
- new pathways to postsecondary education; and
- creative funding mechanisms for human investment.

This chapter examines a few examples of these programs and initiatives.

Apprenticeships are among the oldest forms of high-skill job training. Rules guiding apprenticeships were included in the Code of Hammurabi, which governed Babylon some 4,000 years ago.

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[1] William T. Grant Foundation Commission on Work, Family and Citizenship et al., *States and Communities on the Move: Policy Initiatives to Build a World-Class Workforce*. (Washington DC: William T. Grant Foundation, 1991).

Student Apprenticeships

Apprenticeships are among the oldest forms of high-skills job training. Rules guiding apprenticeships were included in the Code of Hammurabi, which governed Babylon some 4,000 years ago. Apprenticeships were widely used in America until the industrial revolution, when mass production called for repetitious practices and low skills. College became the socially approved route to success, and apprenticeships declined drastically.[2]

In Europe, youth apprenticeships did not fall into disfavor, and have been widely used for many years. For example, Germany trains about 70 percent of its youth–1.7 million–in apprenticeships with some 500,000 employers. U.S. apprenticeships serve only about 300,000 individuals, most of whom are in their late twenties or older.[3] However, U.S. apprenticeships for younger persons are increasing, supported by federal and state initiatives aimed at increasing the availability of apprenticeship programs.

Arkansas created a youth apprenticeship program in 1991 in response to legislation introduced by then-governor Bill Clinton. Target occupations include health services, industrial machiners, small-scale retail management, metal-working, and food service processing/management. The program is based on joint business/education partnerships and is funded with revenues from a one-half cent sales tax increase, a tax on the sale of used vehicles, and a one-half percent increase in state corporate income taxes.

Authorized by 1991 legislation, the **Oregon Youth Apprenticeship Training Program** provided training for up to 100 high school students during its pilot phase. Participants must be at least 16 years old and enrolled in a technical or vocational program. Students can work up to 20 hours per week. Employers pay students salaries equivalent to 80 percent of the going wage for the positions.

Now in the testing phase, the **Pennsylvania Youth Apprenticeship Program** will initially focus on metal working industries. Key design elements include portfolio assessment, work-based mentoring, the integration of academic and vocational instruction, and work-based curriculum projects developed by the Learning Research and Development Center at the University of Pittsburgh. The program includes a four-year integrated curriculum combining academic, technical and occupational education for 16- to 17-year-olds who have completed the tenth grade.

> "The most striking nature of our schools is that the quality of the students they graduate is mostly a function of the background of the students they enroll. Schools that enroll wealthy students produce accomplished graduates and those that enroll students from low-income families typically produce students with poor academic records. We think of the first set as good schools, and there is no reason to do so. A truly good school would be one that graduated students who are more successful than would be predicted by their social class."

Thinking for a Living: Education and the Wealth of Nations. Ray Marshall and Marc Tucker, p. 109.

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[2] Edwin Kiester Jr., "Germany Prepares Kids for Good Jobs, We Were Preparing Ours for Wendy's." *Smithsonian*, March 1993, p. 45

[3] William T. Grant Foundation Commission on Work, Family and Citizenship et al., p. 21.

The Council of Great Lakes Governors includes the governors of **Indiana, Minnesota, Pennsylvania, New York, Illinois, Michigan, Wisconsin, and Ohio**. The council's **Youth Apprenticeship and School-to-Work Initiative** will reinforce school-to-work transition by providing an information clearinghouse to help members create or expand programs; facilitating coordination of efforts among member states; and developing compatible, and mutually understood and recognized standards among various state programs, so that student apprentices certified in one state would be able to work in other member states.

Texas, Oregon, Washington, Georgia, Ohio, California, Indiana, Massachusetts, and Maine have also implemented legislation or are exploring options which will help youths enter the job market through apprenticeships. See Chapter 3 for more about apprenticeships.

School-to-Employment Transitions

Many states are either planning or implementing comprehensive school-to-work transition policies. Among these are Oregon, Wisconsin, Vermont, Minnesota, and New York.

In 1991 **Oregon** instituted legislation aimed at vastly increasing student achievement in order to produce a highly skilled work force for the 21st century. The plan includes enhancement of early childhood programs and adding ungraded programs for Grades K-3. It calls for raising curriculum and performance to world-class standards through higher achievement in reading, mathematics and science, and by utilizing performance-based testing. The program provides for students to achieve a Certificate of Initial Mastery in academic areas by the end of tenth grade, after which time they enter either a college-preparatory, vocational, or professional program.

Wisconsin passed its School-to-Work Initiative in 1991. Key components include multidisciplinary performance-based assessments in the tenth grade that are based on parental involvement, mandatory Tech-Prep programs in each district, youth apprenticeships, and optional enrollment for high school students in postsecondary classes.

Wisconsin has also developed a statewide school-to-work transition approach by legislating and developing an Education for Employment curriculum for Grades K-12. These career development resources were developed by the Vocational Studies Center of the University of Madison at Wisconsin. The teacher handbooks provide resource materials, activity guides, and student worksheets that allow the materials to be used in a variety of subject areas. Continuity is a crucial part of the curriculum; teachers know what activities students have done in the past and what they will be exposed to in the future. Many of the activities require students to explore career options outside of school and develop long-range career plans. In middle school, students develop a "Career Options Jr. Student Planner." A section of the planner calls for students to devise a four-year plan that will help them reach long-term career goals. This encourages young people to plan what courses they will need to take in high school to help them achieve career goals. All students participate in the curriculum.[4]

Several states have established planning councils to study school-to-work transition. Among these are the **Vermont Getting Ready to Work Study Commission**; the **Minnesota Task Force on Education and Employment Transitions**; and the **New York Task Force on Creating Career Pathways for New York's Youth**.

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[4] Robert W. Glover and Kenneth W. Tolo, et al., *Bridging the Gap: Implementing School-to-Work Transition in Austin*, p. 89.

Human Resource Investment Planning Bodies

Several states have formed agencies, commissions or subcabinet groups to develop human investment strategies. These strategies are often aimed at coordinating the activities of each state's education, economic development and training agencies. Committees often include representatives from business, education, government, and labor. States using this approach include Oregon, Indiana, New York, Massachusetts, Washington, New Jersey, and California.

Youth Community Service

Many states and communities are adopting youth service programs. The momentum is based on the belief that youths who serve others gain increased self-worth and become better citizens by contributing to their communities. Service can also make learning more relevant to students' lives. More than 3,000 service programs operate in the nation's schools. Some school systems, such as Atlanta and Detroit, require service for graduation. Job Training Partnership Act monies are increasingly used to fund service programs.

Youths who serve others gain increased self-worth and become better citizens by contributing to their communities.

Among statewide efforts are those in **Pennsylvania**, which invests about $10 million in federal and state funds to support community service and volunteer programs, including a Pennsylvania Conservation Corps for unemployed persons; **Minnesota**, which was the first state to create a statewide youth service program for all young people; and **Maryland**, which was the first state to require each school to make service opportunities available to its students and require service for graduation.

Other states which have enacted legislation to fund community service programs include **California**, **Connecticut**, **Florida**, **Illinois**, and **Washington**. The **District of Columbia** is also seeking ways to fund community service programs.[5] Texas Comptroller John Sharp has proposed that the state form a Texas Youth Corps to give youths work site and community service experience.

Technical Preparation (Tech-Prep)

Tech-Prep sequences are being developed all across the United States. Tech-Prep combines at least two years of high school with two or more years in a community college in a nonduplicative, coherent sequence of courses. Tech-Prep prepares students for careers in such areas as applied science, engineering technology, aquaculture, mechanical arts, industrial arts or trades, agriculture, health, or business. Tech-Prep has been in limited use in the U.S. since 1985. Widespread development of this approach began in 1990, when the Carl D. Perkins Vocational and Applied Technology Education Act encouraged the development of Tech-Prep programs and provided national funding. Tech-Prep systems are operated by consortia of businesses, secondary schools and institutions of higher learning. (See Chapters 3, 4, 5, and 7 for more about Tech-Prep.)

School/Business Partnerships

Cooperation between community elements is major theme in the literature about school-to-work transition. Government, education, business, and the nonprofit private sector must join forces to develop new standards for curriculum and academic achievement, provide work-based learning opportunities for in-school and out-of-school youths, and invest public and private resources in the education and training of youths and adults.[6] Efforts at establishing partnerships are occurring in many states and communities. Among the best examples of these efforts are the **Boston Compact** (see Chapter 3), and Fort Worth ISD's **Project C^3** (see Chapter 7).

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[5] William T. Grant Foundation Commission on Work, Family and Citizenship et al.

[6] Ibid.

[7] William T. Grant Foundation Commission on Work, Family and Citizenship et al., p. 37.

"*Everybody can be great because everybody can serve.*"

Martin Luther King, Jr.

Alternative Learning Centers

Alternative learning centers perform a vital role in helping prepare learners to enter the work force. Traditional approaches to education do not succeed for all students, as high dropout rates demonstrate. Alternative learning centers provide supportive, experiential learning environments for students who have not been well served by traditional classroom education. Research shows that students who do not respond to a traditional approach often succeed in an atmosphere that provides hands-on, experiential learning situations.[7] Learning is supported even more if education is coordinated with the availability of services such as child and health care, career and family counseling, or job placement. Alternative learning centers frequently offer all of these services. Many of these programs also include a significant job training or school-to-work transition component. A number of states are developing policies establishing alternative learning centers. Below are just a few examples of these programs.

New Jersey School-Based Youth Services Program: In 1988 New Jersey established the School-Based Youth Services Program to help youths ages 13-19 complete their education and obtain skills that would lead either to employment or further education, and promote healthy future lives. The program links education and human service delivery in a "one-stop-shopping" format by locating centers at or near secondary schools. Each community designs its program to meet local needs. All centers must offer core services which include health care, mental health and family counseling, job and employment training, and substance abuse counseling. Many centers also provide child care, tutoring, parenting education, family planning, transportation, and information hot lines. Programs operate before and after school, and are often year-round.

New York School to Employment (STEP) Program: This program provides career planning, vocational exploration, and remedial education services to low-income dropouts ages 16-20. The program is designed to get dropouts back into school and help them make the transition from school to work. The program offers students a guarantee of employment upon program completion in return for obtaining a GED certificate while working in subsidized jobs. Services are provided by a community-based agency, which must offer recruitment, preemployment skills, counseling, job development, tutoring, and basic skills remediation. Providers must establish links with local social services providers, human service agencies, and employers. Firms receive up to a 50 percent subsidy for employing STEP students.

New York Skills Opportunity Centers: These statewide centers serve youths ages 16-21 who have left school without receiving a high school diploma. These centers provide youths with basic education, skills training, workplace-based training, employment and career counseling, work experience and internships, job placement, and mentoring.

Kentucky and **Minnesota** are among other states which have developed comprehensive approaches which include alternative centers

Texas Approaches

The states cited above are not alone in developing school-to-work transition initiatives. Texas is making great strides in this area. The next chapter examines some Texas efforts to improve students' work force preparation.

Chapter 7

Efforts in Texas Schools and Communities Which Improve Students' Work Force Preparation

Texas schools, communities, and businesses are increasingly recognizing the need for more effective efforts which help prepare students for the working world. This chapter shows some of the forms these efforts may take. It includes examples of efforts such as alternative programs which, while not focusing primarily on work skills, do impact the work force preparation of young people. The examples in this chapter are provided only as illustrations: this chapter is by no means an exhaustive profile of Texas efforts. The Texas Education Agency Clearinghouse does not endorse these efforts as truly exemplary.

The programs profiled below were collected by recommendation from Texas Education Agency staff, outside experts, and through a sampling survey conducted by the Texas Education Agency Clearinghouse. Schools wishing to nominate their efforts for inclusion in the clearinghouse data base and future publications may complete and return the survey form in the appendix of this document.

School/Business/Community Partnerships

The following projects demonstrate some of the linkages that schools, businesses, and communities have formed in order to make education more relevant to the real world.

Project C^3 (Community, Corporation, Classrooms), Fort Worth Independent School District (ISD). This district-wide project has been widely recognized as one of the best efforts in the nation to prepare students for life outside of school. A cooperative project of the Fort Worth ISD and Fort Worth Chamber of Commerce, C^3 helps ensure that Fort Worth schools educate young people for future success, both in college and in the workplace. The project is based on workplace needs as identified by the Fort Worth community.

Based on input from 3500 employees representing 280 businesses, the performance requirements for 850 jobs were determined. Workers and supervisors began by identifying tasks common to each job. Next, they wrote detailed explanations about how workers perform each task. Finally, they specified the level of proficiency necessary to perform each task. The results indicated a need to prepare students with far more than the basics of reading, writing, and mathematics. The district recognized a need to raise their expectations for students, and to emphasize mathematics, communication skills, reasoning and problem solving, originality and creativity, and computer literacy. Personal characteristics necessary for success were also identified and targeted for development. These qualities include reliability, responsibility, and the ability to work in teams.

Fort Worth educators used this information to identify the skills necessary for employment in the Texas work force. Student training and curricula are being developed to meet these needs. Curricula and pedagogy are delivered in a way that ties school to the world outside school walls. Teachers strive to connect instruction with real-world applications. Students practice and demonstrate real-world applications by working in teams, writing reports, making presentations, conducting research, questioning assumptions, and learning to develop their ideas. A substantial professional development component trains teachers to develop applied curricula which links school content to required work force skills. Project funding is provided in part by grants from J.C. Penney, the National Alliance of Business, Burlington Northern Foundation, the Fort Worth Chamber of Commerce, the College Board, and Texas Instruments.

Project C^3 incorporates many strategies and initiatives, and has been selected as a pilot site for several national initiatives. Among the elements in place as part of Project C^3 are:

- **Equity 2000,** a major national effort to increase the number of low-income and minority students who successfully attend college. Fort Worth is one of six sites nationally to participate in the pilot project. The initiative is funded by the Ford Foundation, the DeWitt Wallace-Reader's Digest Fund, the Amon G. Carter Foundation, the General Electric Foundation, the Meadows Foundation, and the Sid W. Richardson Foundation.
- Fort Worth ISD is one of 15 school districts nationwide to participate in **The New Standards Project**, a national effort described in Chapter 3 of this document. The goals of the New Standards Project are to define world-class standards and to develop a national examination system that includes performance-based examinations, individual and group student projects, and portfolios of student work. It is expected that performance-oriented assessments will help students see the connection between effort put into school and their future goals.
- **TechLab 2000** is a network of nine technology labs that are part of the curriculum at five Fort Worth high schools and four middle schools. The computer-managed network gives students experience in the areas of robotics, computer-aided manufacturing, systems simulations, word processing, and computer-assisted publishing. Students experiment with satellite technology, pneumatic structures, rocketry, aerodynamic testing, flight simulation, space-frame construction, and super conductivity. High school students also experiment with audio/video production, applied physics, and computer applications.

Fort Worth is involved in many other efforts, including developing authentic learning tasks which incorporate recommendations from the Secretary's Commission on Achieving Necessary Skills (SCANS), and is developing a process for compiling competency portfolios of student efforts for each student in the district.[1] Contact: Dr. Gary C. Standridge, (817) 871-2401, or (817) 871-2400.

Austin Adopt-A-School Program, Austin ISD, Austin, Texas. Adopt-A-School programs, which exist nationwide, facilitate school-to-work transitions by encouraging interaction and partnership between businesses and schools. This interaction can help expose students to the working world. Austin is home to one of the largest Adopt-A-School programs in the country. Business participants in this program "adopt" a school, encouraging employees to volunteer time and effort to many facets of the school experience. Each adopter chooses the area or areas in which it would like to be involved. Business involvement may range from making a monetary donation to providing equipment, mentors, tutors, or training programs. During the 1991-92 school year, Austin Adopt-A-School partnerships involved nearly 10,000 volunteers who devoted over 147,000 hours to schools, and gave in-kind cash contributions of $3,330,682.00.[2]

Crockett High School/Motorola MOS-11, Austin ISD, Austin, Texas. Motorola MOS-11 has "adopted" Crockett High School by forming an ongoing partnership. Motorola employees volunteer their time to introduce students to the "real world" and provide mentoring and tutoring assistance. The company also provides high-performance training to Crockett High School teachers. In the 1993-1994 school year, two Crockett students who are interested in pursuing an engineering career will have a chance to work in Motorola's Oak Hill, Texas, facility, where they will be supervised by a vice president.

Motorola also provides monetary support. A grant from Motorola MOS-11 provides a counselor trained in at-risk intervention and career development to work with students in at-risk situations. Integrated support services provide parent education, support groups, and other clinical mental health services in coordination with school guidance counselors. Motorola has also purchased several computers for the school. Contact: Jeannie Blunt, (512) 445-7657.

Texas Scholars Program, Greater Longview Organization of Business and Education (GLOBE), Longview, Texas. This program was developed to inform young people and their parents about the demands of the modern workplace and the necessity to take academically challenging courses in high school. While not a true school-to-work transition program, it is highly effective in impressing young people with the realities of life outside school. Five East Texas school districts participate in Texas Scholars.

The program begins with a presentation by business persons to eighth graders several weeks before they choose their ninth grade classes. The presenters aim to "shock" young people by impressing them with the monetary realities of life outside of school. Presenters guide students in preparing a sample expense budget based on an $18,000 annual salary. Students usually find that they need to earn more than that salary to lead a "comfortable" life. Presenters then tell students what they can expect to earn in various positions, and what skills are required to secure those jobs. Students are then offered the opportunity to become part of the "Globe Scholars" program, which encourages them to carry a challenging course load and maintain a "C" average. In return, local businesses are asked to give priority to these students when making hiring decisions. The program has led to a dramatic increase in the number of students taking academically challenging courses.[3]

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[1] Fort Worth Independent School District. *Fort Worth: Project C^3 Transforming Our Schools.* (Fort Worth ISD: 1991).

[2] Robert W. Glover and Kenneth W. Tolo, et al., *Bridging the Gap: Implementing School-to-Work Transition in Austin, Texas.* (Austin, Texas: Lyndon Baines Johnson School of Public Affairs, The University of Texas at Austin, 1993) p. 47.

Waxahachie Area Vocational Program, Waxahachie ISD, Waxahachie, Texas. This school's partnership with business is based on identifying the skill needs of area businesses, and then helping students meet those needs. Waxahachie ISD in Ellis County conducted a two-year survey of employers and plant managers in the area. Businesses were asked what skills students would need to gain entry-level employment after graduation. Based on the responses, the Waxahachie Area Vocational Program developed classes based on the targeted skills. In addition, the vocational program takes students who are enrolled in preemployment lab classes and places them in the workplace to receive on-the-job training their last semester of school. Students are also placed in jobs after graduation.

The school district operates a school-age parent program partially funded by Job Training Partnership Act resources in connection with the vocational program. Many school-age parents enrolled in vocational classes leave their children at the child care center while attending class. Contact: Dr. Rick McMichael, (214) 923-4614.[4]

Young people often drop out of school because life's pressures become too great to handle. On-site campus intervention and prevention services ease these burdens, giving students the support they often need to stay in school, graduate, and successfully enter the working world.

On-Site Campus Intervention and Prevention

Young people often drop out of school because life's pressures become too great to handle. On-site campus intervention and prevention services ease these burdens, giving students the support they often need to stay in school, graduate, and successfully enter the working world. On-site programs are effective, in part, because they bring their services *directly* to students in need of them. Communities in Schools, profiled below, is an example of campus intervention efforts.

Communities in Schools (CIS): CIS facilitates school-to-work transitions by providing services which help youths stay in school and graduate. CIS operates in 20 Texas cities and is administered by the Texas Employment Commission. Campus-based centers in these cities provide campus intervention and prevention services for students who are in danger of dropping out of school. Services include counseling, tutoring, encouraging parental involvement, referral to social service agencies, enrichment activities, and pre-employment work maturity skills training.

Each local program is governed by a board composed of business, school, and community leaders. The driving philosophy behind each program is that services to in-school youths in at-risk situations can best be provided by bringing professional social service staff and volunteers from business and the community directly into the school. CIS is funded by legislative appropriation and Job Training Partnership Act funds. Contact: Mimi Purnell, (512) 463-0425.

Teachers and Students in the Workplace

Many teachers have not been employed in a business or industrial environment. Because they may be unfamiliar with the skills and attributes businesses need, teachers may be uncertain about how to link classroom activities with the workplace. Programs which bring teachers and students into the workplace facilitate school-to-work transitions by demonstrating the "real world" to all involved. This knowledge, when taken

Glover and Tolo, et al., pp. 86-87.

[4] U.S. Department of Labor, Dallas. Results of unpublished survey compiled in support of the proposed National Youth Apprenticeship Act of 1992.

back to the classroom, makes education more relevant to student needs. The following programs are examples of projects which bring the real world to life for both teachers and students.

"Teachers in Industry," Motorola Corporation, Austin, Texas. Motorola MOS-11 in Austin sponsors an innovative Teachers-in-Industry program, in which the company hires public school teachers for summer internships. This provides teachers with the opportunity to see workplace requirements first-hand. In 1989, 1990 and 1991 the company sponsored five teacher internships, and expanded to 15 internships during the summer of 1992. The company has been pleased with the effectiveness of the teacher interns. One explicit goal of the program is to "make education more relevant to workplace needs," and teachers have been enthusiastic in translating internship experience into classroom projects and materials. During the intern selection process, particular emphasis is placed on the candidates' commitment to student success and personal development. Contact: Barry Dill, Motorola, (512) 891-4913.[5]

"Vital Link, " Fort Worth ISD. Vital Link, an integral part of Fort Worth's Project C^3, was developed by the Education Task Force of the American Business Conference. Says Fort Worth ISD, "Vital Link is based on the premise that students can be motivated to learn in school if they understand the relationship between school achievement and success in the workplace. If students understand the demands that employers will make of them as they enter the work force, and are shown tangible rewards for meeting established criteria, their positive, achievement-oriented behavior in school can be stimulated. By altering their behavior in school to meet certain standards, students can, in turn, expect greater financial and career success."[6] Fort Worth was one of only three sites nationwide initially selected to pilot The Vital Link initiative.

Vital Link offers teachers and students opportunities to experience the "real world" workplace. During the spring and summer of 1993, 2,325 Fort Worth ISD seventh graders and 250 teachers interned in 141 Fort Worth businesses. Most students took part in a week-long, half-day internship, while 370 summer school students took part in a half-day internship plus preparatory and follow-up activities. Students and teachers performed actual on-the-job tasks and kept journals which documented how mathematics, science and reading skills are used in business. Teachers designed classroom activities to reinforce skills learned in class and their real-world applications. Vital Link is affiliated with Fort Worth ISD's Adopt-A-School program. Contact: Nancy Ricker, (817) 871-2445.

Palo Pinto Community Service Corporation (PPCSC), Palo Pinto, Parker, Erath, Hood, Johnson, and Somervell Counties, Texas. This program uses try-out employment and work experience to provide an employment link for its youth participants who are finishing school. Job developers coordinate with local school districts and businesses, targeting job skills and cultivating the job market. Students in their final semester of school are placed in jobs throughout the region to give them experience they need to be successful in the workplace. Participants remain employed after the training is completed.

Beginning in 1992, PPCSC extended its summer youth employment program. Youth participants obtaining a job skill were eligible to enroll in a weekly job search class offered in the Johnson and Hood counties. Classes took place both inside and outside the district. The class focused on adapting the students' skills and marketing them to the business sector. Contact: Diana Council, (817) 325-1393.[7]

Because they may be unfamiliar with the skills and attributes businesses need, teachers may be uncertain about how to link classroom activities with the workplace.

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[5] Robert W. Glover and Kenneth W. Tolo, et al., *Bridging the Gap: Implementing School-to-Work Transition in Austin, Texas.* (Austin, Texas: Lyndon Baines Johnson School of Public Affairs, The University of Texas at Austin, 1993): pp. 78-79.

[6] Fort Worth Independent School District, *Fort Worth: Project C^3: Transforming Our Schools.* (Fort Worth ISD: 1991): p. 17.

[7] U.S. Department of Labor, Dallas. Results of unpublished survey compiled in support of the proposed National Youth Apprenticeship Act of 1992.

Hospitality Services Program, Wyndham Greenspoint Hotel and Spring ISD, Houston, Texas. The Wyndham Greenspoint Hotel has joined forces with Spring ISD, agreeing to serve as a training facility for high school juniors and seniors interested in the hospitality industry. The program offers students an opportunity to pursue academic principles combined with on-site job training The program gives students exposure to all areas of hotel management. First-year students spend six weeks in each hotel department: Front Office, Food and Beverage, Rooms Division, Communications, Accounting, and Human Resources. Second-year students are placed according to their area of interest.

Students experience the real world of work and are treated like employees. They complete employment applications, are processed through a new employee orientation, wear uniforms, perform job duties, and attend hotel-sponsored training on such topics as safety, guest services, and hotel policies and procedures.

The management team within each department works with the students to ensure that the training program is providing the students with a working knowledge of each position and the functions of the department. Students attend classroom training one day each week conducted by the program's instructor. Participants spend the other four days training in the hotel environment. Students graduate from the program with the skills and knowledge to enter actual employment or pursue further training in hospitality or another industry.

The program has created such an interest among students, hotel management, and the school's faculty that it became a three-year program in the 1993-1994 school year. Future seniors will have the opportunity to participate in an advanced hospitality training program at the college level. Contact: Carolyn Ramsey, (713) 586-1112.

Career and Academic Integration

Career and academic integration projects facilitate effective school-to-work transitions by making course content more relevant to the real world, and by challenging all students to perform at high levels. A survey by the Texas Council on Vocational Education (TCOVE) revealed that, as of spring 1993, 84 percent of Texas school districts surveyed reported that they have taken steps to integrate vocational and academic education.[8]

The Texas Education Agency awarded funding to help 13 pilot schools develop curricula which integrate academics with vocational/technical skills. Program oversight is provided by East Texas State University's Educational Development and Training Center. The pilot sites are Abilene ISD, Austin ISD, Boles Home ISD, Cooper ISD, Cumby ISD, Greenville ISD, Mansfield ISD, Pampa ISD, Round Rock ISD, Socorro ISD, Schleicher ISD, Tyler ISD, and Wilmer-Hutchinson ISD. The program focuses on making course materials relevant to the real world. As "real world" realities vary considerably between towns and schools, the program relies heavily on site-based management to determine the direction of each school's curriculum. Strategies focus on a rigorous integrated curriculum and using team-teaching methods to reach all students. Funding is provided under the Carl D. Perkins Vocational and Applied Technology Education Act. Programs at two of the EDTC's pilot sites–Pampa ISD and Schleicher ISD–are profiled below. Contact: Mary Hendrix or Gail Clark at the Educational Development and Training Center, 1-(800)-356-EDTC.[9]

Pampa High School, Pampa ISD, Pampa, Texas. Chosen as one of the state's integration pilot sites which are supported by a Carl Perkins grant, Pampa High School's vision of integrating academic and vocational education reflects the school district's mission "to graduate responsible, adaptable, creative and successful citizens . . . ." Pampa decided to start by trying to make English more relevant to students. They designed two new courses: an integrated English I course "supported by vocational education" and a vocational course "supported by English."

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[8] Texas Council on Vocational Education, *Integration: Preparing Texas Students for the Work Force*, (Austin, Texas: Texas Council on Vocational Education, 1993), p. 8.

[9] Deron Bissett, "The Transition from School to Work: The Critical Link to Employment," *Clearinghouse FORUM* (Newsletter), March 1992, p. 5.

On the academic side of the integration equation, vocational and English instructors were paired to design the English I course and team teach all its essential elements in an applied way. The content of the original English I curriculum remained intact, but "hands-on" activities in vocational labs were added to make it more meaningful. For example, the students didn't just read *Romeo and Juliet*, they performed an activity for each act of the play, spending time in the home economics lab designing costumes and in the print shop making invitations.

The English teacher observed that many students who did not normally excel at "pencil and paper" tasks did exceptionally well with the varied learning styles. They discussed themes in the play such as family life-styles and parent-teen conflicts in terms of how the characters' lives related to their own. "The students realized that people have not changed much over 400 years, and they could relate to the teenage problems of those young lovers of long ago," said Mary Sturgeon, the English teacher.

Another English lesson taught in the home economics lab demonstrated how grammar relates to work with an exercise that required students to design a packaging label for a product. Students learned how important the order of written words—or how detrimental a misplaced adjective—can be to the selling of a product. At the same time, the students were introduced to a career field, commercial design, to which they may want to apply their talents in the future. Pampa is now using its integrated English I course to teach all 9th graders.

The second component of Pampa's initial integration efforts is a vocational course which incorporates academic competencies from English. The senior-level Marketing I elective course was redesigned and named "Entrepreneurship." In the course, students learn to design and build a product, write a report on it, present it to a Board of Directors, and market it. The class is team-taught by teachers of marketing, English, wood shop, metal shop, and computer applications. Students go into the various labs to complete the relevant parts of the project. They integrate and incorporate material they have learned previously from other courses and exercise skills needed on the job such as thinking, problem-solving, oral and written communications, and math skills. The course was designed to attract students who plan to attend college, as well as work-bound students. It succeeded in that goal the first time it was offered.[10] Contact: Daniel Coward, (806) 669-4800.

Eldorado High School, Schleicher ISD, Eldorado, Texas. This school has chosen a "Dinner Theater Project" as a method for integrating academic and vocational curricula. The project will be accomplished during a two-year time span, and will involve students in English, special education, art, accounting, computer science, vocational education, and other classes. Students will write and produce a dinner theater presentation. Many Schleicher County businesses and individuals are also involved. Students in advanced English classes are studying *The Time It Never Rained*, a novel by local writer Elmer Kelton, and, with Kelton's approval, writing a play based on the novel, which is set in Schleicher County in the 1950s. Students from various classes will perform the roles, publicize the event, design and build the sets, make costumes, and handle financing. Students have arranged a loan with local bankers to cover some of the expenses. The meal served during the production will be based on foods popular during the 1950s. Students will research the foods, learn how to prepare them, and then cook and serve the meal to dinner theater guests. (Eldorado High School has been selected as a Mentor High School by the Texas Education Agency.) Contact: Ken Newman, (915) 853-2549.

Schools which are not EDTC integration pilot sites are also active in combining career and academic skills. Several examples follow.

Northbrook Middle School, Spring Branch ISD, Houston, Texas. At Spring Branch ISD, initial efforts to integrate academic and vocational education focus on career awareness before students enter high school. Educators there believe that one of the keys to successful achievement in high school is advance preparation in middle school. Thus, their academic integration "Model of Career Awareness Curriculum" is a pilot project at Northbrook Middle School which focuses on introducing all eighth grade students to career opportunities, including those requiring postsecondary training, and then counseling them on a four-year high school schedule of courses to pursue the career goals they have identified. "Students have the opportunity to view what high school has to offer them," according to the Spring Branch literature.

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[10] Texas Council on Vocational Education, pp. 22-23. Reprinted by permission.

The Spring Branch model is a six-week project in which career awareness activities and life skills are integrated into the four core courses using essential elements. An interdisciplinary team of academic and vocational teachers work together to write the curriculum and coordinate activities among the courses. Students actively explore career options and make their own choices.

For example, in language arts and English as a Second Language courses, students complete a career assessment battery, research a career/occupation, write a paper or give a multimedia presentation about their selected occupation, and write a proposal for a company. In science class, their tasks include predicting average salaries of people in various occupations and at various educational levels and projecting future occupations. Among the lessons completed in social studies are researching economic information about daily life through the newspaper and analyzing the various economic needs of average Americans. Finally, in mathematics, students interpret bar graphs, collect data, and analyze stock market data to make predictions about the futures of companies.

Spring Branch's vision for integrating academic and vocational education continues once students reach high school. At that level, the program is called "Strategies for Academic Success" (SAS). SAS is a Tech-Prep model of integrating academic and vocational education that begins in the 9th grade. Again, academic disciplines are taught in relation to students' particular career choices. For example, in English class, a student may be given an assignment to write a description of her vision of an ideal career and what she is doing in school to achieve that. Students work in groups and perform "hands-on" activities with appropriate "props." For example, special tiles are used to visually present algebra concepts such as polynomials. Groups of teachers work together, sharing a common 23-minute period during the day to plan. Algebra and English teachers also co-teach a SAS lab to give extra help to students who need it.[11] Contact: Susan Wolf, (713) 462-7294.

Goose Creek ISD, Baytown, Texas. This school district is restructuring in order to help students prepare for their future lives outside of school. Students in Grades K-12 are learning about real-world requirements through a process the district calls "Authentic Connections." One goal is to prepare *all* of the district's students to graduate with a career objective and be prepared to pursue college or technical training. Classes emphasize rigorous coursework and applied learning. The district makes an intensive effort to meet with business, industry, and higher education representatives and learn what they look for in graduates and employees. Curriculum is structured to produce graduates who meet those needs. One focus for students in Grades K-5 is career awareness and hands-on activities. Students in Grades 6-8 take applied academic courses, and are exposed to the working world through focused career exploration and career interest assessments. Each student develops an individual educational career plan in preparation for career-specific courses in high school.

In high school, all students must choose one of six general career majors health services, human services, engineering and industrial technology, business, environmental/agricultural sciences, or liberal arts. Students in Grades 9-10 take core academic courses and introductory career courses. In Grades 11-12, students take more advanced applied courses and prepare for further study after graduation. Career aptitude and interest assessments are given in Grades 3, 5, 8, 10 and 12. The district's Tech-Prep curricula prepares students to enter further study at Lee College in business, drafting, data processing, machine shop, electronics, welding, or aerospace technology. Other training options include health occupations preceptorship, aerospace technology, associated building contractors (welding and millwright), auto collision repair, early childhood professions, computer programming internships, apprenticeship training, cooperative education, and laboratory experiences.

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[11] Texas Council on Vocational Education, pp. 23-24. Reprinted by permission.

Goose Creek ISD has developed linkages at elementary, junior, and high school levels with parents, the community, postsecondary institutions, and business and industry. The district has established postsecondary connections with Lee College, Texas A&M University, Texas State Technical College, San Jacinto Community College, and the University of Houston at Clear Lake City. The district maintains business/industry connections with Exxon, Chevron, Miles Laboratories, Associated Building and Contractors, Texas Medical Center, the Houston Business Roundtable, NASA, Rockwell International, McDonnell Douglas, and Tech Force 2000. Contact: Dr. Harry Griffith, Superintendent, (713) 420-4800.

Writing for the Community, Trimble Technical High School, Fort Worth ISD, Fort Worth, Texas. Integration of workplace and academic skills takes place in this class when students research and develop writing projects for area businesses. Students examine public documents and develop projects which involve writing brochures, advertisements, manuals, pamphlets, and other business and community communications. They conduct interviews, take field notes, do technical research, and check accuracy of information. The class works with business partners to learn how writing is used on specific jobs.

Students work with corporate partners to complete writing projects that have real audiences and purposes. They must manage complex tasks with many stages; become skillful at gathering, applying, evaluating, and using information from many sources; and exhibit a variety of communication skills. Students develop an awareness of writing as a social, political, and economic act. Contact: Gary Braudaway, (817) 871-3400.

Brownwood High School, Brownwood ISD, Brownwood, Texas. This school-within-a-school, which began during the 1992-1993 school year, offers students both vocational and academic instruction in the same setting. The workplace curriculum focuses on automotive technology, industrial technology, electronics, and microcomputers. English, mathematics, and science teachers are on site and team-teach with vocational teachers. Teachers are given an extra planning period each day so the vocational and academic teachers can meet and coordinate their teaching activities. Each academic teacher teaches two classes related to vocational skills. The school offers two mathematics classes related to auto mechanics, two English classes related to technology and industry, and two classes in health care science. Classes focus on real-world experiences. For example, students in one English class have written a bicycle repair manual. Contact: Tommy Horner, (915) 646-9549.

Focused Schools

Focused schools offer concentrated academic and vocational integration by providing an intensive learning environment which is "focused" on a broad career area. Students gain in-depth exposure to a career field. Several Texas schools which use this approach are profiled below.

High School for Law Enforcement and Criminal Justice, Houston ISD, Houston, Texas. The goal of this magnet school is to prepare students with a strong academic education in conjunction with an in-depth study of law enforcement and criminal justice. The school has been recognized as a High School Mentor Site by the Texas Education Agency. The curriculum was developed with direct community input. Staff members continually meet with persons in law enforcement and criminal justice to ensure that programs accurately reflect real-world requirements. Teachers integrate law enforcement themes into their daily lesson plans. Many classes use simulations and projects, rather than standardized tests, as a means of evaluation and assessment. The high school has the lowest dropout rate in the Houston ISD. Contact: Dr. Norma I. Morris, Principal, (713) 861-5100.

Health Careers High School, Northside ISD, San Antonio, Texas. This nationally recognized magnet public school, in its tenth year of existence, is open at no cost to all students in the San Antonio area who have a strong interest in the health care professions. The student body includes students who live up to 30 miles away from the campus. The purpose of the school is to provide students with a high-quality academic education while helping them decide whether to pursue a medical or health career. The faculty includes health professionals such as registered nurses and medical technicians.

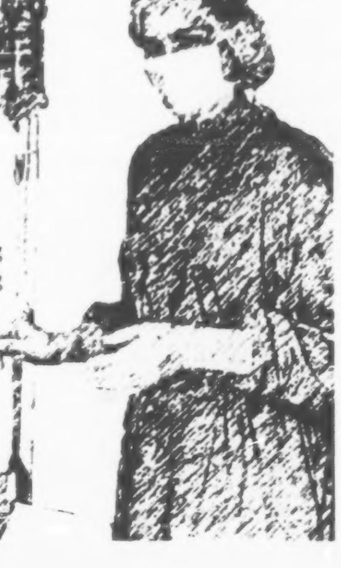
Students attend seven classes each day, including English, mathematics, science, and health or medical electives. All academic courses integrate medical and health issues into the course content, demonstrating to students the relevance of academics to real life. Sophomore students enroll in chemistry and anatomy. Students are encouraged to take additional mathematics and science courses as electives. Seventy-five percent of all graduates have taken physics.

Much student learning takes place in the health and medical community, in seven area hospitals and medical complexes where formal legal affiliation agreements have been arranged. These affiliation agreements give students the opportunity to hear guest speakers, take field trips, and be mentored by health care professionals. A clinical rotation program gives students work site experience in various departments of local hospitals.

Seventy-six percent of graduates are working in and/or pursuing certification in a health medical field. Ninety-six percent of graduates are enrolled in 2- or 4-year college or university programs. Contact: John M. Boyers, Principal, (210) 692-0022.

High School for Medical Professions, Forth Worth ISD, Fort Worth, Texas. Students with the appropriate interests, aptitudes, grades and citizenship records apply for admission to this magnet school, which focuses on health occupations. The curriculum follows a coherent sequence of rigorous courses, including anatomy/physiology, advanced placement biology and lab management, or advanced placement chemistry and lab management, which are taught in two-hour blocks. The four-year plan also include a health careers exploration course, health care science, and one or two years of health occupations laboratory taught in a clinical rotation method that assigns junior-level students to several different health care facilities. Students get first-hand work experience, learning job duties and responsibilities. Students have a code of conduct and dress that is jointly agreed upon by students and parents before students report to clinical sites. These job activities build responsibility, work maturity, decision-making skills, and critical thinking skills.

An advisory committee of health professionals helped with program development and continues to advise the program. Contact: Vivian Smith, (817) 871-2742.



Job Training Partnership Act-Funded Programs

One goal of the Job Training Partnership Act is to keep young people in school and help them graduate, while enhancing their workplace skills. The following programs are examples of Job Training Partnership Act-funded efforts in Texas schools.

Were On Our Way (WOW) Program, Dunbar High School, Fort Worth ISD, Fort Worth, Texas. We're On Our Way is a school-to-work transition program jointly sponsored by the local private industry council and Fort Worth ISD. Participants must meet Job Training Partnership Act (JTPA) eligibility requirements and be in danger of not completing high school. For the first two months of the school year, students participate in a daily three-hour class of intensive instruction on employability skills (work habits and attitudes) and job-specific skills for office-related work. For the remainder of the school year, students work three hours each day in an office occupation. Student wages are subsidized with JTPA funds.

Students also participate in class for one hour each day to continue developing skills related year the teacher helps the students find unsubsidized employment. Contact: Jean Lane, (817) 871-2745, or Judy Wall, (817) 871-2744.

Summer Training and Education Program (STEP) (Several Sites). The STEP program provides youths participating in summer Job Training Partnership Act-funded activities with a unique opportunity to participate in a 15-month program that incorporates academics, work experience and school support to youths who are below grade level. The program was developed in response to the retention loss students were experiencing during the summer months. Using specially developed modules, youths increase their reading and mathematics skills through practical academics that will help them function in life and the workplace. After spending the morning in class, students devote the afternoon to work. Most first-year students have never had a job before and have no idea how to function in the workplace. Second year students are placed in jobs that require advanced workplace skills. These jobs are often located within city or county government.

Job Training for Valued Youth Tutoring Program (Numerous Sites). Originally developed by the Intercultural Development Research Association in San Antonio, this program serves youths who are in grave danger of dropping out of school. These students are identified as "valued youth" and given the opportunity to tutor elementary students. Student tutors receive a stipend paid by Job Training Partnership Act (JTPA) funds. While helping the younger children learn, tutors also learn basic academic skills, work maturity, develop positive perceptions of themselves and stay in school.

The program includes six major components: classes for student tutors, tutoring sessions, field trips, role modeling, parental involvement, student recognition, and basic skills training.

Tech-Prep Efforts

Tech-Prep efforts in Texas are viewed as *systems* or *processes*, rather than as *programs*, due to their comprehensive and coherent nature. (See Chapter 5 for a more in-depth description of the Texas approach to Tech-Prep.) Tech-Prep in Texas combines the final several years of secondary education with two or more years of postsecondary education through a formal articulation agreement between consortia of secondary and postsecondary schools. Tech-Prep provides students with a non-duplicative sequence of progressive achievements leading to associate degrees in marketable careers. Tech-Prep trains students for occupations which have been identified by local committees as central to the economic development of the area served by each program. Texas is served by 25 Tech-Prep Consortia. (Refer to the appendix for a list of Texas consortia and contacts.) Texas Tech-Prep efforts must meet very high standards, and must be approved by the Texas Education Agency and Texas Higher Education Coordinating Board. Two examples of Tech-Prep consortia activities follow.

Upper Rio Grande Tech-Prep Consortium, El Paso, Texas. This consortium targets careers in automotive technology, agriculture, drafting, electronics, computer/office technology, teachers' aide, environmental studies, law enforcement, and health occupations. All courses of study at the high school and postsecondary school levels require both classroom and work experience. Two courses of study have been approved as Tech-Prep systems by the Texas Education Agency and the Higher Education Coordinating Board.

Tech-Prep sequences in **nursing** are offered in four school districts served by the consortium. Sequences in **drafting** are offered in three school districts. The consortium is also active in developing apprenticeships in plastic injection molding, tool and die, industrial maintenance, and warehousing. Contact: Holly Woelber, (915) 774-0076.

Capital Area Tech-Prep Consortium, Austin, Texas. This consortium serves 32 independent school districts. It collaborates with 30 employer partners to establish Tech-Prep systems between the member school districts and 18 post-secondary institutions. Collaborators include students, principals, parents, curriculum supervisors, teachers, counselors, state agencies, ministers, business, industry, community-based organizations, labor, elected officials, and state agency personnel. The consortium provides career counseling for students from junior high through community-college levels, integrates vocational and academic competencies, provides professional development for all stakeholders, offers job-site training for students, supports cooperative education, and develops apprenticeships. Students are tracked to gauge their progress while in training and then on the job. Students in training are tracked according to their achievement of the SCANS skills and competencies.

The consortium has targeted several areas for Tech-Prep training: Electronics/Manufacturing/ Telecommunications; Business and Office Systems of the Future; Wholesale, Retail, and International Marketing; Engineering Design/Drafting; and Intergenerational Options, which include programs in child care, elder care, health care, institutional management, and preschool, elementary, special, and bilingual education. Curricula in 26 other areas are under development. The consortium has developed a 5-year apprenticeship with the Associated Builders and Contractors, and is developing other apprenticeships. Contact: Dr. Cassy Key, (512) 483-7720.

Alternative Programs or Centers

Students who drop out of school will not be prepared to enter the high-skills marketplace of the future. Alternative programs support effective school-to-work transitions by helping young people remain in school and/or adults return to school and graduate while building their self-esteem and capacity for further learning. Alternative programs often contain a workplace skills component. Following are several examples of alternative programs in Texas schools.

Bowie County School of Success (SOS), Macedonia Campus, Liberty-Eylau ISD. This is a school for young adults with special needs that are not being met in a traditional school setting. Students from all secondary schools in Bowie County are eligible to apply. Students must be age 15-21, two or more years below grade level, failing two or more subjects, or already have dropped out of school. Special consideration is given to students who are abused, overage, pregnant or parenting, are recommended by the courts, exhibit antisocial behaviors, are unmotivated, or are undergoing rehabilitation for drug or alcohol abuse. Students cannot be assigned by others to the campus–they must personally apply to the school and be interviewed by staff before they are admitted. The student and the school choose each other.

The goal of SOS is to help students obtain their high school diploma in an encouraging atmosphere with high expectations for all students. Administrators and teachers assume that all students will display a positive attitude toward the school. SOS offers individualized instruction, self-paced curriculum, flexible scheduling, a 12-month school year, and free transportation from any secondary school in Bowie County. Students may take advantage of a child care facility on campus; a "Life Skills Program" that includes a Ropes course; computer-assisted instruction; and an informal, relaxed atmosphere. Contact: Gaylon Garrison, Director, (903) 831-5767.

KEYS (Keeping Eligible Youth in School) Learning Center, Euless, Texas. The goal of this program is to help students in at-risk situations, parenting or pregnant teens, and dropouts to complete high school and become contributing members of society. Students range in age from 15 to 21. The program relies on early identification of students in at-risk situations and focuses on intensive tutorial intervention, modified curriculum, targeted teaching strategies, and parental education and training. Students with academic, personal, economic, or attitudinal disadvantages may apply for admission.

KEYS offers self-esteem enhancement; guidance and support services; academic development; vocational and business testing; training and placement; child care and transportation support services for teen parents; parental and community involvement programs; and individualized, self-paced, and computer-assisted instruction. Contact: Betty Coon, (817) 354-3580.

The PRIDE (Positive Responsible Individuals Desiring Education) Center, San Marcos, Texas. This program serves students age 16-21 who have dropped out of school or are in danger of dropping out. Its objective is to provide an innovative, nontraditional school setting that promotes success, enhances self-esteem, helps students develop positive attitudes toward school, promotes concern for others, teaches students to become self-directed learners, and prepares students to become lifelong learners.

The PRIDE Center strives to create a small, caring, warm family environment that provides students with the support system they need to succeed. Program features include competency-based learning, outcomes-based education processes, self-paced individualized instruction, flexible scheduling, an extended school year, computer-assisted instruction, a full-time counselor and social worker, and a child care center. Contact: Anna Lopez, (512) 396-6864.

School-Based Enterprise

Student-operated businesses are an excellent way for young people to learn about workplace demands and acquire marketable skills. Two examples follow

Student-Operated Graphic Arts Business, Robstown High School, Robstown ISD. Students are trained in computer technology. Activities include hands-on experience in desktop publishing; layout and design; darkroom procedures; bindery; and use of the printing press, including maintenance and trouble shooting. Students develop job skills and learn to work with customers on a variety of graphic projects. Among the skills learned are estimating job costs and job scheduling. Customers include the school district and local businesses. Experiences mirror those in the business world. Contact: Gaynell Thames, (512) 387-5999.

Poly Entrepreneurial Project, Fort Worth ISD, Fort Worth, Texas. The program's goal is to stimulate the entrepreneurial interests of 16- through 21-year-old youths who are in at-risk situations. Students participate in planning and implementing activities of a small printing business. Students earn credits toward a high school diploma and earn minimum wages once they enter the advanced phase of the program. The skills they learn are readily applicable to real-world work situations. Ongoing counseling and monitoring of students' progress helps them successfully complete the program. Contact: Jesse C. Cummings, (817) 531-6299.

Training for Students with Disabilities

Students with disabilities are often inadequately served when it comes to workplace training. The program profiled below is an excellent example of efforts to help students with handicaps develop workplace and life skills.

Bowie Transitional and Training Center, Bowie, Texas. The Montague County school districts created a nonprofit corporation to provide employment and training for students with disabilities. The corporation provides the vehicle to transition students from the school world to the working world. To date, 36 students and former students have been placed in competitive employment. The corporation also provides more than $200,000 in work contracts for individuals with handicaps, and directly employed 24 individuals with handicaps during 1991.

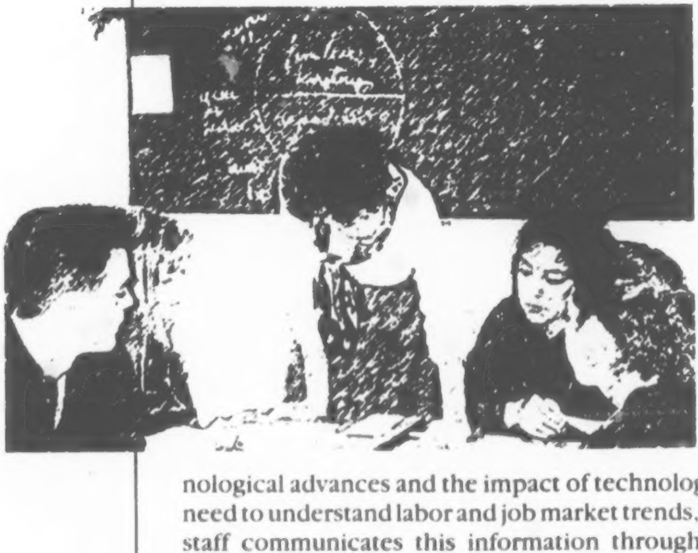
The program at the Bowie Transitional and Training Center is designed for students 16 and older who have moderate to severe disabilities. The program has an in-house training and vocational component. In-house training stresses life skills and preemployment skills. The vocational component provides real jobs at not less than minimum wage in a supportive work environment where work skills can be developed. The program also serves as a link to other service providers, such as the Texas Rehabilitation Commission and the Job Training Partnership Act system. Contact: Jack Reed, (817) 872-2623.

Student Job Placement Center

Even after students achieve in school and graduate, they often do not know how to effectively look for job openings, or how to interview successfully for those openings. Student job placement centers ease that uncertainty by giving students the information and support they need for a successful job search. Fort Worth ISD's placement center, profiled below, offers students that much-needed assistance.

Graduate Placement Center, Fort Worth ISD. This is a coordinated placement service for seniors, recent graduates, and persons who have left high school without receiving a diploma. A staff of three placement specialists, a human resources specialist, a coordinator, and secretary serve the needs of the Fort Worth ISD graduates of thirteen high schools plus special programs. Employability skills training occurs in senior-level classrooms of each high school. Services of the placement center are emphasized. Students are encouraged to use the center's resources and staff as they plan careers and search for employment. The center is centrally located and independent of any school campus. It looks and operates like a business office.

Students complete application forms and are evaluated for needed assistance. They receive one-on-one reviews and guidance from the center staff to strengthen their self-directed job search techniques, and may work on resumes, interviewing skills, networking, and other aspects of successful job acquisition. The clients have access to a job data base and other job postings. They are coached by human resources specialists prior to job interviews. Contact is maintained with clients of the center until a job search is successful, or alternative placement is implemented.



Center staff also conduct classroom activities that are designed to impact student performance. The staff makes presentations that emphasize the necessity for students to obtain a quality education in order to be employable in the current labor market. Students are told that they need to be aware of technological advances and the impact of technology on job seekers. They also learn about the need to understand labor and job market trends, and respond to employer expectations. The staff communicates this information through presentations to seniors, vocational and academic classes, and at "Career Day" and freshman orientation. The presenters stress the importance of the Texas Assessment of Academic Skills test and SCANS skills and competencies. Contact: Buford Neal, (817) 871-3264.

Chapter 8

SCANS Competencies in the Classroom

The five competencies identified by the Secretary's Commission on Achieving Necessary Skills (SCANS)–resources, information, interpersonal skills, systems, and technology–are more than requirements for success in the workplace: they have applications for many other areas of life as well. Many educators have voiced support for integrating SCANS skills and competencies into the classroom. For example, SCANS is an important component in the Texas Education Agency's *Master Plan for Career and Technical Education* (1993).

Many educators are uncertain about how to introduce these skills to students. Some have suggested requiring a separate class, ("SCANS 101") for graduation. Some educators, who may have little or no workplace experience outside the classroom, often do not understand how SCANS competencies are essential to future workers, how the competencies contribute to students' current lives, or how to integrate them into classroom settings.[1]

Most authorities suggest teaching these skills within a real-world context. This means that students should be able to learn and apply SCANS know-how in real-life workplace situations or simulations, as well as through internships, job-shadowing activities, or mentorships. Learning within the context of real-life requires that students work together in groups, as they often will in the real world. By working together on problems, students are more actively involved.

> *"Imparting SCANS skills is not so much about curriculum as pedagogy: How instruction is delivered as opposed to what specifically is taught."*
>
> Steffen Palko, Member of Secretary's Commission on Achieving Necessary Skills

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[1] Deron Bissett, "Work-Based Learning: Moving from the Strategic to the Operational," *ATPE Newsletter*, March/April 1993, pp. 27-28

Resources identified by SCANS as important include time, money, people, and materials.

In this example, taken from *Teaching the SCANS Competencies* (1993), a high school chemistry class in **Fort Worth ISD** integrated a class project with skills in all five SCANS competencies. Italics have been added to emphasize the skills and competencies students were developing.

Students were asked to determine the best fertilizer for the school to use:

> Students worked together in small groups, and each group tackled the problem in its own way *(interpersonal skills)*. They designed experiments to investigate the effects of fertilizers differing in chemical composition *(information, technology, resources)*. When they needed more information, they called on experts from industry or academia (*resources, information, interpersonal skills*). Their recommendations were not based only on applying chemistry and using scientific methods; they also had to weigh costs and other feasibility factors *(information, systems, technology, resources)*. Once they reached conclusions, students had to develop reports, including charts and computer graphics, which would present their conclusions and persuade school decision-makers to accept their recommendations *(information, technology, systems, interpersonal skills)*. They studied how such decisions are made within the institution *(resources, systems)*, determined how to inform and convince key players *(resources, systems, information, interpersonal skills)*, and participated in the negotiation process *(information, systems, interpersonal skills)*.[2]

The following examples demonstrate how educators are incorporating SCANS competencies into classroom activities.

Allocating Resources

The allocation of resources is important not only on the job, but in everyday life, whether a person is preparing a personal budget, deciding how time can best be allocated to accomplish a variety of errands, or deciding how best to get the kids from one activity to another. Resources identified by SCANS as important include **time, money, people,** and **materials**.

The **New York State Education Department** has produced a curriculum module on personal resource management to develop students' skills in management of time and economic and human resources. In the *time-management* portion of the module, students examine case studies involving effective time management and requiring the development and use of a weekly time and activity schedule. They develop skills in *managing human resources* by examining case studies of situations involving effective use of human resources, and participate in brainstorming sessions about how individual members of a given group contribute to the success or failure of a group effort. The *economic resources* module includes student performance objectives dealing with achieving financial goals and understanding and preparing a personal budget.[3]

The **Interactive Mathematics Project**, a joint effort of the University of California at Berkeley and San Francisco State University, is a three-year pilot project in which students learn mathematics by solving real-world problems. Participants gain expertise in SCANS resources skills. In a unit called "The Overland Trail," students examine the problems faced by pioneers headed west during the mid-1800s. They use mathematical concepts to decide what to take for the move, how much food to bring, estimate costs, study rates of food consumption and travel, and estimate the time required to reach the destination.[4]

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[2] The Secretary's Commission on Achieving Necessary Skills, *Teaching the SCANS Competencies* (Washington DC: U.S. Department of Labor, 1994), pp. 15-16.

[3] Ibid., p. 24.

At **Caloosa Elementary School, Cape Coral, Florida**, the **Community Within Academic Walls** gives students the opportunity to develop resources skills by operating classroom establishments, including stores, a postal system, a restaurant, a TV station, an employment agency, a publishing company, a government agency, and a bank. Students gain resource skills by depositing "Caloosa money" in checking or savings accounts at the bank, and deciding how much money to allocate for spending at other classroom establishments.[5]

Using Information

Today's society thrives on information. Every day, whether at work or home, people must constantly find, use, evaluate, and communicate many kinds of information. For example, Sally might want to locate a particular program on a complex TV schedule, or an item of information in a data base. She has to know how to locate that information. Then she might want to evaluate that information and pass it on to others. That act of evaluating and transmitting information requires other skills. Schools have traditionally viewed imparting knowledge to their students as a large part of their responsibility. SCANS suggests that it equally important for students to learn to **find, evaluate, compile, organize, maintain, package,** and **communicate** information.

The **Michigan Employability Skills Learning Guide** includes performance and behavior indicators and learning activities for key employability skills, and grounds those skills in real-world examples. In a lesson on how to use labor market information, for example, students chart a career in a chosen occupation by using such resources as guest speakers, organizational charts, libraries, computers, and the *Dictionary of Occupational Titles*. Students are evaluated according to how well they identify various data sources, determine career advancement opportunities, and describe economic and social factors affecting the labor market.[6]

At Foothill Middle School in Walnut Creek, California, a member school in the **National Geographic Society's Kids Network**, students in Grades 5-7 science classes examined acid rain levels in local water sources. Teams of students collected and assessed the accuracy of the data, and used computers to record and then communicate the data. The data, along with information from other Kids Network classrooms across the country, was electronically transferred to a central location where Kids Network staffers organized the data and sent it back to all participating schools. Students could then compare their findings with those of students in other parts of the country.[7]

> *"High-performance workplaces . . . require . . . the ability to manage resources, to work amicably and productively with others, to acquire and use information, to master complex systems, and to work with a variety of technologies."*
>
> ***Learning a Living: A Blueprint for High Performance***

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[4] Ibid., p. 25.

[5] Ibid., p. 26.

[6] Ibid., p. 30.

[7] Ibid., p. 32.

Alternative mathematics assignments are another method of introducing real-life situations into the classroom. Many students who have adequate mathematics skills have difficulty solving complex work problems which present them with information not needed to solve the problem. Determining what information to use, and what to disregard, is difficult for many students. Some mathematics teachers have suggested that, instead of asking students to solve word problems, they should be given real-world assignments instead. For example, students might be asked to determine the most economical vacation for a family of four by examining travel brochures, airline schedules, and hotel advertisements. The students must decide what information they need, where to find it, and determine if other factors should be considered.[8]

Utilizing Interpersonal Skills

Life requires constant interaction with other people. Education, however, frequently has not made social interaction skills a priority. The SCANS interpersonal skills, valuable in personal as well as business life, include **sharing tasks necessary to complete a project; encouraging others by listening and responding appropriately; recognizing and building on individual strengths; resolving conflicts for the good of the group; taking personal responsibility;** and **responsibly challenging existing procedures, policies, or authorities.** Implicit is the ability to work with people of differing personalities, cultures and beliefs.

The **National Academy Foundation** in New York City has developed activities to foster interpersonal skills. In one activity, students are divided into groups and asked to create a game and write clear and understandable rules. They have a time limit for completing this activity. A student from each group is asked to act as a recorder, and observe various behaviors, such as how each group makes decisions. The observer records these observations on a special form. When time is up, a speaker for each group explains the game rules to the entire class, which evaluates the rules for clarity. Then the student observer reports to the class on the group's behaviors. The report helps group members to understand how they related to others and functioned within the group, and how the group functioned as a whole. Students also gain experience in teaching others and communicating information.[9]

Understanding Systems

A system is a group of regularly interacting or interdependent items forming a unified whole. A school district is a system. A multinational corporation is another system. A state's government, with its many offices and personnel, is another system. Each element of a system operates individually, but also interacts with other elements of the system, producing a ripple effect of change or reaction. For example, events in one school may cause change in the overall school system. Understanding the interdependence of system elements helps us understand how systems work. Understanding systems helps us understand how many of the world's processes occur. SCANS systems skills include **understanding systems, monitoring and correcting performance**, and **improving or designing systems**.

One way of making systems dynamics clearer to students is by integrating systems thinking into regular subjects. For example, the arms race is an example of a system. A history teacher might include a demonstration of the arms race in a discussion of U.S.-Soviet relations. He or she could demonstrate how one arms increase led to another increase, and how changes in both U.S. and Soviet systems led to disarmament.

Systems learning may also be linked to the world of work. In **Orange Grove Middle School, Tucson, Arizona**, classes are scheduled in blocks so that academic subjects can be integrated. Teachers in each block share a common planning period. Classes integrate workplace situations with academic content. For example, seventh grade students who

[8] Ibid., p. 41

[9] Ibid., p. 58

have just completed a two-month study of geology in science and fractions in mathematics are divided into six groups. Each group forms a fictional company which mines and sells aluminum and copper. Based on their knowledge of geology and mathematics, the "officers" of each company decide which mines to keep and sell, how to allocate capital among production, marketing, pollution control, research and development, public relations, etc. All six companies are linked to form a "marketplace." Based on supply, demand, and prices determined by the companies, a computer calculates marketplace conditions based on the students' decisions. This provides a graphic demonstration of systems at work–in this case, each "company" is a system, and the larger marketplace they form is also a system.[10]

Students at the same school also study systems thinking by designing a **New State Park**. Students in this project research park management, philosophy, land management, recreation theory, geography, ecological community theory, and politics. Given a fictitious $100,000 budget, they use this knowledge to design a new park. Various factors must be considered in park design: students must use the land originally set aside for the purpose, yet avoid a lawsuit by not desecrating adjacent Indian burial sites. Also, the park must be attractive to users but not appreciably damaging to the environment. Students use computer spreadsheets to examine fiscal aspects of the development, and a computerized model of park development/environmental degradation to evaluate the impact of their design.[11]

Developing Technological Competency

Technology pervades our daily lives. The SCANS definition of technological competency involves developing the ability to understand computers, machines, and other tools and use them to solve problems. This includes developing skills in **selecting technology, applying technology, and maintaining** and **troubleshooting technology.**

SCANS systems skills include understanding systems, monitoring and correcting performance, and improving or designing systems.

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[10] Ibid., p. 45.

[11] Ibid., p. 45

In **Fort Worth ISD,** high technology labs are a regular part of middle and high schools. Students use computers and other high-tech devices to study rocketry, robotics, computer-aided manufacturing, and pneumatic structures, among other things. For example, students have created a computer-assisted manufacturing loop in which a robot unloads an item onto a conveyor belt. The belt carries the object through an electronic eye, which tells the computer the item is ready to be unloaded. After unloading, another machine drills a hole in the item, and returns it to the robot.[12]

Developing Linkages Between Classrooms and the Workplace

The next chapter examines strategies for helping learners make better choices, developing linkages between businesses and schools, and ways to integrate vocational and academic education.

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[12] Ibid., p. 49

Chapter 9

Helping Learners Make Better Choices

Improved Guidance and Counseling is Crucial

The increasingly complex high-skills world will demand changes in how and what students are taught. Implicit in preparing students with the high skills needed in a technological world is the need for students–and teachers–to learn as much about that world as possible. For students, that means exposure to classroom activities that link academic material with real-world skills and situations (applied learning). Teachers, in order to create an applied learning environment, must learn as much as possible about the world outside school walls.

The demands of the school and business environments are quite different. Many teachers and counselors have not been employed in a nonschool environment, and so are unfamiliar with workplace demands. They are experienced at teaching their own specialty within a school environment. But few are experienced at linking curriculum with what is required in the "real world," or with the cross-disciplinary practices necessary to link academic and vocational education. Future classroom activities will require a very close linkage between academic and workplace situations, and a change in how instruction is delivered.

> *"The evidence is conclusive . . . that one's ultimate work performance will be profoundly affected by prenatal and preschool development and the influence of home and family."*
>
> Center for Policy Studies, George Washington University, 1992

The future will also demand increased counseling and guidance services from both guidance counselors and classroom teachers. It is becoming ever more important that youths be able to make informed education and career decisions. Youths need to be familiar with different career options, the skills required in different occupations, their earnings potential, and the short-term and long-term demands of different occupations. This requires increased involvement by guidance counselors and teachers.

Adult learners also need counseling services. This support is especially crucial for the 75 percent of adults who do not graduate from college. These learners often need guidance to help them choose options for completing their high school education, as well as selecting further training. And learning does not end with graduation from college or technical school: the high-skills world requires adult workers who are active learners. The rapidly changing world today requires adult learners who can adapt rapidly, and who often will change careers several times during their working lives. These adults need counseling, guidance, and further training as they choose new career pathways.

A Changing Role for Counselors

The role of counselors is changing. Under the "old" system, still common in many schools, a school counselor was solely responsible for student guidance and counseling. The counselor provided traditional services such as orientation, placement, and counseling, and was often isolated from involvement with the curriculum and the rest of the staff. The counselor often served as a "sorter," determining what courses students would take, channeling "gifted" students into higher-level courses and the "less gifted" into lower-level or vocational courses. Many hours were spent scheduling rather than counseling students. The remaining time was often dominated by crisis counseling to help students solve pressing personal problems. Little time was left for career counseling, or for staying up-to-date on trends in business and industry, and job placement opportunities for students.

In the new environment the role of the counselor changes. The counselor becomes a team member with the rest of the faculty in achieving student outcome goals. He or she insists that teachers guide learning activities in a way that shows students the relationship between school and careers. The counselor must constantly develop and update materials to help students, parents and teachers stay current on the changing nature of the workplace and its demands. The guidance staff is faced with a monumental task, and cannot perform it alone: the new environment will require the total school faculty to get involved in career guidance and counseling activities, demand a more active role for parents, and benefit from intensive business support and involvement.

How Counselors Can Enhance Career Awareness

A very important aspect of improving school-to-work transition is increasing learners' awareness about the working world and their role in that world. Counselors can take many steps to enhance this awareness. The following steps were intended for counselors in schools implementing Tech-Prep programs. However, the steps apply to other transition programs as well:

- implement a developmental guidance model for Grades K-12;
- provide all students with interest and aptitude assessments;
- provide school-wide activities that promote the awareness of career opportunities;
- provide students with information about community or technical colleges;
- give special attention to females, minorities and students with special needs, and provide them with knowledge of opportunities;
- provide students with access to materials and resources that explain the career options;
- help students develop a portfolio that summarizes their education and experiential credentials; and
- utilize career planners.[1]

Parental Involvement

Parents have an important impact on their child's aspirations for success in school and the workplace. According to the Southern Regional Education Board, "the amount of encouragement and support children receive at home can make the difference in whether they set their sights high or settle for 'getting by.'"[2] Ideally, parents should join forces with teachers and counselors to make sure that their children aspire to succeed in school and life. They attend parent conferences, watch the student's progress closely, and expose their children to the workplace and its changing demands. Reality may be far different, however. Parents may not be aware that their children are taking courses below their potential. Some parents know that their child is capable of taking harder courses, but want to protect her or him from the possibility of failure.

The National Committee for Citizens in Education reports these key findings about parent involvement in the educational process:

- Involving parents in a son's or daughter's education improves achievement.
- Parental involvement is most effective when it is comprehensive, long-lasting, and well-planned.
- Parental involvement must not be limited to the home. Parents must take an active role in the school at all levels.
- Young people from low-income and minority families have the most to gain from parental involvement. Parents do not have to be well educated to make a difference.[3]

> *According to the Southern Regional Education Board, "the amount of encouragement and support children receive at home can make the difference in whether they set their sights high or settle for 'getting by.'"*

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[1] Catherine Chew, *Tech-Prep and Counseling: A Resource Guide*, (Madison, Wisconsin: Center on Education and Work, University of Wisconsin, 1993): Appendix L, unpaginated.

[2] Southern Regional Education Board, *Making High Schools Work Through Integration of Academic and Vocational Education*, (Atlanta, Georgia: Southern Regional Education Board, 1992): p. 175.

[3] Ibid., p. 176.

Strategies for Encouraging Parental Involvement

The Parent Institute offers these strategies schools can use to encourage parents to participate in the educational process:

- **Know the secret to getting parents to attend meetings at school: invite them.** Most parents do not feel welcome at school. They are reluctant to attend school activities because they often feel teachers don't really want them to come. Some studies show parents are right. Make an effort to genuinely invite parents to school activities, either through written invitation or a phone call.
- **Recognize the natural, human reluctance teachers have to contact parents.** Studies show that teachers are more reluctant to contact parents than parents are to contact teachers. Work to overcome the problem by getting to know parents as people who care about their kids.
- **Use videotape to show busy parents their students in action.** Send tapes home. Show them while parents are waiting for conferences. This is a video age and showing parents their children in action in their school habitat conveys powerful messages.
- **Hold several open house programs throughout the year,** including visitation days and unrehearsed regular days where parents can see a real class in action.
- **Display students' work**–every student's work, not just the best students' work.
- **Greet visiting parents as quickly as possible.** You might use volunteers to help.
- **Know the major reasons parents give for not getting involved:** (1) Some don't have time. (2) Some don't know what to do. (3) Parents may not think it is important. (4) Some parents don't speak English. Knowing the barriers is the first step in finding ways around them.
- **Announce that you will hold informal coffee times at school on a regular schedule and encourage parents to drop in whenever they can.**
- **Establish and use parent advisory groups.** Parents will participate and help if they feel genuinely wanted, welcome, and needed.
- **Don't wait until it's too late to give parents bad news.** If you see a problem developing, contact parents fast–while there's still hope.
- **Share with parents experiences you have had with your own children.** This breaks down barriers, gets you out of your teacher role, and helps parents see you as a fellow parent.
- **Recognize what parents are doing to help students–praise them for their efforts.**
- **Use simple evaluation forms to elicit parent feedback on every meeting or event.**
- **At group meetings with parents, never ask questions where there can be wrong answers.** Nothing will better ensure that parents never come back than being embarrassed at a parent meeting.
- **Tap the vast parent resource pool every school has**–parents who have lived overseas, who speak other languages, who have jobs that use skills schools are trying to teach students, who have hobbies that fit into the curriculum.
- **Get parents out with projects that call on their special abilities by asking them to be speakers. Other incentives, such as raffles, can also help bring parents into schools.**
- **Take parents' pictures at group functions.** Tell them in advance that pictures will be taken with their student, and prepare for a crowd. Put up a "welcome" sign in every language spoken by students and parents at your school. Ask parents' help to get the words right.

- **Establish friendly contact with parents early in the year, in time of peace before there is any opportunity for anyone to be upset with anyone else.**
- **Set up a parent center in your school. Stock it with resources to help parents.**
- **Consider designing learning contracts you can use to involve school, parents, and students.**
- **Encourage businesses to provide parent employees time off to attend school conferences.**
- **Remember that hard-to-reach parents can often be reached through their churches, synagogues, or other places of worship.**[4]

Involved parents can greatly support the efforts of guidance counselors and schools in helping prepare young people for their future lives in the real world. Parents can also provide support for the restructuring of schools and the learning environment. That process involves change. And the persons who actually cause that change are the teachers.

Professional Development

Whenever teachers link classroom lessons with real-world skills, they become participants in the career guidance arena and school restructuring. To impart real-world skills to students, teachers must know what skills are required in the outside world and how to impart those skills to students. Many teachers have not been exposed to the business world, and so do not know what it requires. They may be unfamiliar with teaching techniques which link classroom learning with real-world requirements. Continuing staff development is crucial for teachers to learn what the working world requires, and how to best prepare students for that world.

Teachers are the foundation for change. They must learn to raise their expectations, and believe that all children can learn. They must set challenging goals, and expect students to achieve those goals. They must visit regularly with business people and become familiar with a business environment, so they can guide student learning and choices more effectively.

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[4] Ibid., pp. 177-178.

Schools and classrooms need to change in order to effectively prepare young people for the outside world. Teachers are the foundation for that change. They must learn to raise their expectations, and believe that *all* children can learn. They must set challenging goals, and expect students to achieve those goals. They must visit regularly with business people and become familiar with a business environment, so they can guide student learning and choices more effectively. Teachers must learn new classroom techniques that weave examples from work and life into classroom activities. They must learn methods of instructional delivery that are often new to them: methods such as applied learning, team teaching, cooperative learning, and building business/education partnerships.

Teachers cannot do it alone. Linking schools with real-world requirements is another part of school restructuring. Restructuring requires support from school administration. Administrators must send clear messages to teachers that they support change and will provide staff with the professional development to make the change a reality. That means providing the resources for additional training, and, when necessary, allowing teachers to take time away from school for professional development activities.

The Educational Development and Training Center at East Texas State University is providing oversight to 13 pilot schools which are integrating academic and work force learning. Funding for the project is provided by the Texas Education Agency. The center suggests that schools seeking to restructure and integrate real-world and academic skills need professional development in these areas:

- **Awareness of the need for restructuring:** Why schools must change, especially in how students are prepared for the work force. Emphasis is placed on the fundamentals of integrating academic and vocational education.
- **Outcome-based education:** The traditional model of education is *time-driven* and based on the assumption that not all students will be successful. Students are given a limited time to learn subject matter, and not all succeed. Student grades are "fitted" to a Bell curve to determine who passes and fails. Outcomes-based education is *success driven*. It assumes that all students can learn if they are given adequate time to learn and are exposed to appropriate forms of instruction. Outcomes-based education operates on four principles: expanded opportunity and support for learning success, high expectations for all to succeed, clarity of focus on outcomes, and instructional design tied to desired outcomes.
- **Team-building/site-based management:** Effective integrated instruction must be delivered by close-knit teams. Site-based management is essential in order for schools to develop programs that meet their students' special needs, and was mandatory in Texas schools by the 1992-1993 school year. Most teachers have not received training in site-based management.
- **Creating partnerships between community, business and industry, and parents:** Business, parents, and education must work together to prepare young people for the world outside school. (See Chapter 10 for strategies to develop linkages between schools and businesses.)
- **Total Quality Management (TQM):** This approach, developed by Dr. W. Edward Deming, assumes that, in order to improve outcomes, the processes that lead to those outcomes must be improved.
- **Learning styles:** Students learn in different ways. A few learn best by listening to lectures–the predominant method of instructional delivery. But many others are visual or kinesthetic learners. Teachers need to learn to deliver instruction in ways which meet the learning needs of all students.

- **Authentic assessment:** Multiple-choice and standardized tests are not suitable to a learning environment which seeks to expose students to the "real world." Teachers must explore other forms of assessment, such as portfolios and performance-based measures.
- **Cooperative learning:** Most work-site experiences are group efforts. Cooperative learning activities can provide students with the social skills they need in the workplace; provide a lively, involved learning environment; and can serve as an alternative to ability grouping, remediation, or special education. When appropriately done, cooperative learning activities encourage students to discuss, disagree, debate, and teach one another. Teachers must learn to guide these efforts.
- **The counselor's role in restructuring:** Counselors play a key role in restructuring. They advise students about course selection and career paths.
- **Interdisciplinary lesson plan writing:** Lesson plans which integrate academic and real-world skills are different from academic lesson plans. The plans must incorporate real-world learning activities into academic material. Objectives and assessment methods will reflect that difference.[5]

The Southern Regional Education Board (SREB) suggests that teachers receive professional development in:

- **Reading and writing for learning across the curriculum:** Reading and writing can be effective forms of instruction across all subject areas, yet many teachers are not prepared to include these forms of instruction in their classroom strategies.
- **Applied mathematics skills and strategies:** The SREB reports that, while six in 10 academic and vocational teachers believe that it is important to teach mathematics in an applied or occupational context, only one in three know how to do it well. Mathematical concepts can be taught through a practical approach that uses mathematics in a real-world context. Mathematics becomes more interesting and accessible to students.
- **Team building:** Vocational and academic teachers need team-building skills in order to integrate academic and vocational studies. School systems need to acknowledge the necessity for providing additional hours for teachers to prepare for team-teaching or integrated efforts.
- **Raising expectations for student achievement:** Schools have traditionally held low expectations for the "forgotten half." In order to effectively prepare all students for the future, schools must believe that all students can learn. Schools must hold high expectations for *all* students, not just for those who plan to attend college.[6]

Labor Market Information

All professionals who work with learners need to be as knowledgeable as possible about occupations and the skills they require. Texas educators and learners have access to unique resources to help them become more knowledgeable about the world outside of school. The Texas State Occupational Information Coordinating Committee (TSOICC) provides teachers, counselors and students with a variety of materials to help students explore and plan careers. TSOICC maintains a career information hot line (1-800-822-PLAN) which provides students with information on about 1000 careers: what they pay, what training is required, and which schools offer the training.

[5] Gail Clark, ***Blueprint for Integration of Academic and Vocational Education***, (Commerce, Texas: Educational Development and Training Center the Texas Education Agency, 1992): pp. 49-54.

[6] Southern Regional Education Board, pp. 181-184.

The organization has produced a video for classroom use, which talks to students on their level and uses rapid-paced visuals and sound effects to hold their attention. It explains how to use the hot line, how much it costs to lead a "comfortable" life, why students need a high school diploma and education beyond high school, the various ways to get additional training and education, and the necessity for students to explore their career options while still in high school. The video is accompanied by materials for classroom discussion and research, including a quiz, a research assignment, and a budget work sheet to help students determine how much money they need to earn to live comfortably.

TSOICC also publishes a *Career Succe$$* tabloid newspaper, which explores career options for Texas students. The 40-page newspaper contains articles on career planning, occupations, schools, financial aid, job-hunting tips, and what employers want from their employees. About 250 careers are described, including job duties, suggested education, average salaries, and job outlook. The newspaper may be useful to career guidance counselors, who can encourage their students to use it as a job hunting and planning tool. It can also be valuable in classroom career-planning exercises. Parents can benefit from a four-page pullout section which describes how they can help their children achieve career goals. The pullout section also describes financial aid sources and job training programs.

Chapter 10

Developing Linkages Between Classrooms and the Workplace

Everyone gains when schools, businesses and other organizations work together to prepare young people for the working world. Students' horizons expand as they learn more about the world beyond the classroom, gain on-the-job experience, and achieve more academically. Students tend to stay in school as lessons become more relevant to *them*. Teachers gain access to real-world expertise and state-of-the art methods and equipment, and gain insight into the world outside school. Employers have a hand in how future workers are prepared and gain access to a pool of qualified potential employees. The whole community benefits as its separate elements begin to work together for the good of students and the local economy.

In short, everyone wins.

School-business partnerships are usually formed at the local level, with a single school district, when the school and business communities realize that they can accomplish more for students when they pool their respective resources. The resources of each partner contribute to the effectiveness of the partnership. Each partner–the school, business, local government and individual community members–bring unique and important elements into the mix.

It takes an entire village
to raise a single child.

African Proverb

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School partners provide instruction to students, offer program development and scheduling expertise, logistical support, and limited funding. They often handle accounting, record-keeping and project supervisory tasks.

Businesses contribute "job-related criteria for inclusion in classroom curriculum. They provide on-the-job training, tours, presentations, practice job interviews . . . funding, mentors, supervisors, equipment, supplies . . . community contacts . . . and of course–part-time and permanent jobs at non-subsidized wages."[1]

Other partners offer expanded resources and focus public attention on partnership objectives and activities. These partners might include city and county governments, family assistance organizations, chambers of commerce, or trade associations. They may function as facilitators in negotiating "turf" problems between partners.

Partnerships do not occur effortlessly: any time different people or groups strive toward a common goal, difficulties will arise. Each will have different motivations, orientations, and ideas about how to reach that goal. An effective partnership must overcome these differences and channel the energies of all involved toward the common good of the community's youth. Partnerships require time, commitment, compromise, planning, and patience.

> *"The status quo is not an option.*
> *The choice we have is to become a nation*
> *of high skills or one of low wages.*
> *The choice is ours.*
> *It should be clear.*
> *It must be made."*

America's Choice: High Skills or Low Wages!, National Center on Education and the Economy, p. 9.

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[1] U.S. Department of Labor, Employment and Training Administration *School-to-Work Connections Formulas for Success.* (Washington, DC: U.S. Department of Labor, 1992): p. 3

Keys to Success

Following are what the U.S. Department of Labor calls the "keys" to successful partnerships. These keys are based on a recent study of successful school-to-work transition programs:[2]

1. **Partners should develop a clear, *shared* vision of intended outcomes and should be particularly sensitive to one another's individual objectives.**

   Before anything happens, careful, thorough negotiation must produce a genuine understanding among partners regarding expected outcomes. These expectations should be written down.

   When developing objectives, the short- and long-term needs of each partner should be considered. For example, programs which serve youths in at-risk situations often lead to better attendance and higher graduation rates for schools, help employers meet affirmative action goals, and help communities and service organizations use their funds more efficiently.

2. **Educators should adopt a private sector industry perspective that emphasizes performance.**

   Schools do not have unilateral control over the education process in a partnership, instead accepting the responsibility for carrying out the partnership's established mandates. The school's role is that of the "main service-providing player on the partnership team. . . ."[3] Schools must be ready to deal with accountability issues and negotiate when problems arise.

   It is also important that schools be committed to time lines. The U.S. Department of Labor found that schools with successful programs learned how to bring training on-line quickly. That usually requires faster decision-making and flexibility than is typical in most school systems.

3. **Partners must allow for the fact that it takes time to formulate stable, lasting partnerships.**

   A good partnership may take as long as seven years to develop, according to the U.S. Department of Labor. This time can be expensive, as upper-level managers and school administrators devote their expertise to implementation, especially in the early stages. Even after the partnership is established and running successfully, continuous readjustment is required to meet the changing environment.

4. **Partnerships must foster climates of negotiation and cooperation.**

   Many partnerships establish oversight committees to act as brokers between differing views of how things should be done. These brokers can help produce "win-win" situations and make sure that the needs of all partners are equally served. A broker's role is to keep the focus on two issues: *students' needs* and *expected outcomes*. By focusing on these needs and outcomes, partners broaden their motivations beyond their own self interests.

5. **Developing the partnership around a single school or school system eases the burden of administration.**

   Partnerships can function smoothly when a number of businesses are involved. However, because each school's administration operates differently, the process of developing the partnership is easier for all involved if one educational entity is the point of contact for all partners.

[2] Ibid., pp. 4-5.

[3] Ibid., p. 4.

6. **Employers of all sizes and types should be included in school-to-work partnerships.**

   Large companies can usually provide more on-the-job training slots, and have more resources to handle the increased supervisory responsibilities. Smaller businesses tend to depend on the programs to provide part-time workers. Large businesses offer more structured training to students. Smaller businesses, on the other hand, can usually provide students with a greater variety of work experiences. Positions in small businesses are often less specialized: a part-time worker may be called upon to perform more varied tasks.

7. **Partnerships must foster open, honest, and frequent communication.**

   Communications must be frequent and honest, and often occur daily. New ideas are encouraged, discussed, and implemented whenever possible. If an idea is rejected, partners are encouraged to rework it in order to make it useful. This open flow of ideas tends to create feelings of ownership and commitment among all partners.

8. **Commitment must come from the very top levels of participating organizations.**

   The U.S. Department of Labor says that this may be the single most important point learned during their studies. The final authority for making and implementing decisions comes from the top of an organization's hierarchy, whether it is a school or a business. The level of commitment at the top will diffuse throughout the entire organization. If top managers and administrators are actively supportive of the partnership, ownership and pride filter down within the organization and commitment is expanded and reinforced.

Schools and businesses which have decided to establish a school-to-work transition partnership must realize that they will devote a considerable amount of their personal time to developing the partnership.

Careful and Time-Consuming Planning is Essential

Schools and businesses which have decided to establish a school-to-work transition partnership must realize that they will devote a considerable amount of their personal time to developing the partnership. This time is usually uncompensated and at the expense of personal pursuits. The U.S. Department of Labor found that there was a direct correlation between the extent of each partner's personal investment and the success of the program. This time is usually measured in years rather than weeks or months: partnerships often require up to three years from initiation to start-up; another two-to-three years for implementation and revision; and two more years to reach maturity and produce significant results.[4]

This planning should be market-driven. It must deal with the realities that face the community and its working environment. Flexibility must be built in to allow for rapidly changing conditions.

Guiding Principles for a School-to-Work Partnership

The U.S. Department of Labor recommends that school-to-work business and education partnerships be guided by these basic principles:

- **High Standards:** School-to-work transition programs should be designed to allow all students to attain high academic levels.
- **Staying in School:** School-to-work transition programs should motivate youth to stay in school and become productive citizens.
- **Employment and Careers:** School-to-work transition programs should enhance the participants' prospects for immediate employment after leaving school, and for entry on a path that provides significant opportunity for continued education and career development.

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[4] Ibid., p. 7

Steps in Developing the Partnership [5]

- Set up a committee which includes representatives of all known stakeholder organizations; assign it the task of giving initial form and substance to the partnership.
- Structure initial meetings as free-flow discussion sessions. Talk about target groups, levels of commitment and involvement, geographic boundaries, and potential resources. Make sure that all representatives join in the discussion.
- Formulate the mission of the partnership; describe the idea clearly in a page or two. Be explicit about proposed outcomes, including the benefits that would accrue for each partner. Focus on ends rather than means.
- Develop a structure for the partnership. Consider such factors as membership criteria (who should represent each stakeholder organization), levels of commitment required, and rules that govern participant interaction and dealings with the public. Establish regular meeting dates and elicit leadership. Draft and sign ***Memorandums of Understanding*** that divide tasks and responsibilities among the participants. Again, ***involve all stakeholders***. Resolve to continue the dialogue.
- Establish and maintain such linkage mechanisms as advisory committees and boards of directors, fund-raising programs, subcommittees, etc. These will help sustain and extend the partnership.
- Write the school-to-work transition program. Establish goals, measurable objectives, time frames, resource allocations, expectations, roles and responsibilities, etc. Again, formalize the plan within a document that stakeholders can sign. Be sure to develop program alternatives and consider the probability for the success of each. Divide the program into phases with clearly differentiated beginning, midway and mature program activities and objectives.
- Develop an aggressive outreach campaign—speak to community groups, participate in civic events and projects; connect with governmental offices, and advertise the program to potential partners and participants. Provide frequent progress updates to media sources, government agencies, target groups, partners, and other interested parties.
- Continually review and revise the program. Include all stakeholders in an ongoing evaluation process and strive for consensus in all decision making. Check regularly with partners regarding their perceptions of progress. Recognize that revision is necessary for continuing growth.

Focus on the Classroom

All commitment, planning, and hard work converge on the classroom and the experience students have in it. The more closely teachers can link classroom materials and lessons to workplace experiences, the more successful the program will be. The best teaching strategies involve incorporating actual or simulated job operations into regular lesson content. This tends to generate higher-level thinking skills. Students have more motivation to stay in school because they are learning information readily relevant to their futures.

Classroom lessons might include linking reading, mathematics, and writing to workplace situations. Other lessons might include employability and life-coping skills such as oral communication, taking directions, resolving conflicts, accepting criticism, and avoiding drugs and alcohol.

The Secretary's Commission on Achieving Necessary Skills (SCANS) explored the workplace skills and competencies which students will need as workers in the 21st century. See Chapter 4 to examine the commission's recommendations. See Chapter 8 for examples of how to integrate SCANS skills and competencies into classrooms.

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[5] Ibid., p. 6

Ideas for Incorporating Job-Related Elements Into the Classroom Experience

The U.S. Department of Labor offers these suggestions for linking school and work in lesson plans:[6]

- Involve employers in curriculum development and evaluation to ensure that content, expectations, examples, and standards reflect actual work-site experiences.
- Create classroom lessons that reflect the demands of the workplace and convey specific on-the-job performance requirements to students.
- Group various competencies into clusters that are associated with job-specific tasks and build manageable, interdisciplinary learning activities around the tasks.
- Emphasize demonstrations, performance modeling and supervisor coaching as the primary means of teaching students.
- Test students in ways that measure such job-specific criteria as performance quality, production rates, safety, customer satisfaction, and manufacturer's specifications.
- *Personalize* instruction as much as possible. Develop individual learning contracts for training, work in and with small teams, and provide support services on an individual basis.
- Design learning tasks to reflect and reinforce work tasks. Include basic skills and employability skills in the same process.
- Structure lessons so that students *learn by doing*. Academic lessons should support work-related learn-by-doing tasks rather than the reverse.
- Express lesson assignments as "Work Orders" reflecting those used in industry.
- Emphasize quality and productivity by applying reasonable pressure on students to perform tasks *correctly* and *on time*–as determined by industry standards.
- Encourage students to *work in teams* to complete learning assignments. Be sure to match more experienced students with less-experienced students.
- Use actual work site materials (manuals, installation instructions, safety materials, forms, tools, etc.) as part of routine lesson content.
- Issue supplies, tools and equipment in a way similar to that of the work site. Use a work-based requisition process for issuing materials.
- Organize the training area like the work site for whatever industry you train for. Explicitly discuss the work climate.
- Whenever possible, use real products and "customer relations" between student and customer as part of learning.
- Sustain instruction patterns between instructor and student that mimic those of the work site in terms of formality, expectation, discipline and responsibilities.

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[6] Annemarie McCracken, North Central Texas Council of Governments. Results of survey compiled for the U.S. Department of Labor, 1992.

"Essential Elements" for Vocational/Academic Integration

School/business partnerships have proven effective in introducing students to the working world. Much can also be done within school walls. Integration of vocational and academic education is especially helpful, and can greatly strengthen efforts begun by the partnership. The Educational Development and Training Center at East Texas State University, which has worked with 13 pilot sites where schools were integrating academic and vocational education, offers a "step-by-step" plan for achieving integration:[7]

- **Choose a coordinator.** The job of coordinator requires quite a bit of time for organizing and soliciting participation. The coordinator should be thoroughly convinced of the need for change in the educational system.
- **Form a focus group.** The greater the excitement and commitment at high administrative levels, the more successful the project seems to be. Try to involve the superintendent or assistant superintendent and encourage him or her to take an active role in the entire project. A principal or vice-principal, the vocational director, and a counselor (all counselors, if possible) are necessary for the focus group. Also include at least one or two of each of the following: academic teacher, vocational teacher, parent, school board member, and student. Also include at least three people from local businesses and industries. This diverse mixture offers input from various points of view.
- **Select courses to be integrated.** After the focus group is selected, they need to discuss education needs and trends for jobs of the future and look at how the local school is preparing students for that future. Other school problems, such as test scores, failure rates, absentee rates, etc., should also be discussed. From these discussions the group should be able to come to a consensus about areas of the curriculum where courses can be integrated to fit the needs and the problems of the school and community.

  The key to successful school systems is their ability to measure what they want against what they already have, and then, through research and intellectual practice, to work to close that gap.
- **Select teacher/administrative personnel.** The teachers must represent the disciplines to be integrated. Both vocational and academic teachers are necessary. Voluntary participation of committed people is best. Don't force anyone to be involved in the integration process. The level of commitment by both academic and vocational teachers is a significant factor in determining the success or failure of integration. If necessary and feasible, offer small stipends or extra preparation time as incentives.
- **Have a meeting of focus group and teachers to discuss common goals and individual roles.** Many teachers have been away from business and industry for many years. Others have never worked in business or industry. This meeting is a good time for business personnel to talk with teachers about academic and social skills needed by entry-level workers. These conversations are critical for successful integration.
- **Provide staff development for all participating teachers and administrators.** Perhaps the term "staff development" should be changed to "staff renewal" since it is actually a means for continuous "growth in practice." John Goodlad, in *A Place Called School*, says, "The school is the place for change." Staff development or staff renewal, is the medium for this change. Serious staff development involves personal learning about one's self in relation to one's students.

For more information about EDTC's vocational and academic integration efforts, contact Mary Hendrix or Gail Clark at 1-(800)-356-3382.

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[7] Gail Clark, *Blueprint for Integration of Academic and Vocational Education* (Commerce, Texas: Educational Development and Training Center, East Texas State University, and Texas Education Agency), pp. 57-64.

How Employers Can Support School-to-Work Efforts[8]

Employers can also contribute to increasing youths' readiness for the work force. According to the Texas Department of Commerce, ways employers can support school-to-work transition efforts include:

- active employer involvement in schools, especially with youths in Grades 6-9, teaching or sharing insights about workplace requirements, and the important role of school in preparing young people for workplace demands;
- support for work-based learning opportunities for youths by opening up work sites to qualified young people enrolled in work-based learning programs. This includes incentives for employers who allow students to experience the work environment. Such incentives might include tax breaks for employers who provide training for youths within business, industry, and/or labor settings;
- involvement with state representatives to educate the legislature about the needs of business, industry and labor, and about the mandate for insurance and workers compensation reform to support work-based learning for youths and adults; and
- training adults, including educators, administrators, and public officials about the real-world work environment. This will require actually inviting these professionals into the work site for skills and awareness training.

Employers can expect real benefits from work-based training efforts, says the Texas Department of Commerce:

- access to an expanded pool of qualified applicants;
- more qualified minorities and women in the applicant pool;
- a lower turn-over rate of entry-level employees;
- fewer tax dollars allocated to welfare and criminal justice systems; and
- reduced remedial and training costs, which would transfer to higher investments in research and development, and profits.

Practical Concerns: Getting to Work

Now suppose that a partnership has been carefully planned and implemented, and the school is effectively delivering instruction which integrates school and work. Employers are becoming actively involved in school-to-work transition and work-based learning programs. The students are diligently learning higher-level skills, staying in school, and looking forward to a bright future. Some hard facts remain: employers rarely hire young people right out of high school, even when they have degrees. What is required is a fundamental change in the way employers view young workers, and in the way high schools assist their graduates.

> *"You won't have much of a life if you can't make a living. (In our society) most adults identify themselves, organize their lives, gain their sense of self-worth, and contribute to the human community by what they do for a living."*
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> **Ray Marshall, 1992**

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[8] Deron Bissett, "Work-Based Learning: Moving from the Strategic to the Operational." *ATPE Newsletter*, March/April 1993, pp. 27-28.

Establish Student Career Planning and Placement Centers

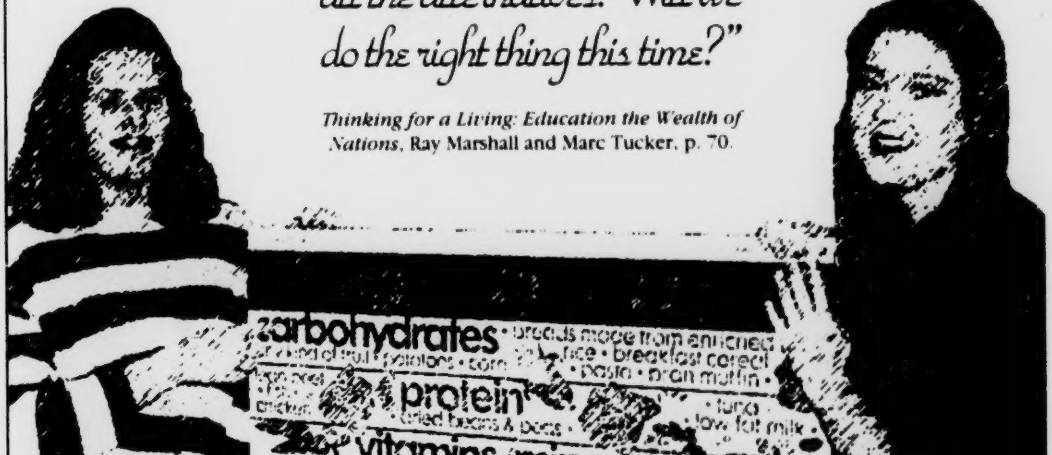
High schools can reduce the job-hunting problems of work-bound students and bolster the authority of teachers by offering the same services to work-bound students that they now offer to the college-bound. High school job placement offices could be created to establish close ties with employers to promote job opportunities for students. These centers could offer job counseling and placement services, and enhance students' job-locating and interviewing skills.

Employers Must Hire High School Graduates Who Possess High Skills

But even the best placement office cannot work miracles, finding high-skills jobs for young people where no such jobs exist. Educators and business people talk at length about preparing these students for a high-skills, high-tech future. All too often, however, even the best-prepared high school and college graduates are relegated to menial, low-skills jobs until they reach their "mature" mid-20s. Effective school-to-work transition programs will increase the supply of skilled young people. Employer demand for these skilled individuals must also increase.

Rather than waiting for future employees to reach their mid-20s, employers need to trust in the effectiveness of the program they may have helped create, and hire its graduates. Many students today believe, perhaps correctly, that they cannot get good jobs even with high skills and a high school diploma. Students need to know that desirable jobs are available to them, or they will have little incentive to learn, even in the best school-to-work transition program.

> "Winston Churchill once remarked that the United States always does the right thing—after it has exhausted all the alternatives. Will we do the right thing this time?"
>
> *Thinking for a Living: Education the Wealth of Nations*, Ray Marshall and Marc Tucker, p. 70.



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Resources

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Heart of Texas (Region 11)
David England
McLennan Community College
1400 College Drive
Waco, Texas 76702-1498
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Lower Rio Grande Valley (Region 21)
Arturo McDonald, Jr.
Short Course Center
TSTC-Harlingen
Harlingen, Texas 78550-3697
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Fax: (210) 425-0797

Middle Rio Grande (Region 24)
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Middle Rio Grande Development Council
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Uvalde, Texas 78801-5203
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North Central Texas (Region 4)
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North East Texas
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Northeast Texas Community College
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North Texas (Region 3)
Beverly Larson
Region IX Education Service Center
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Wichita Falls, Texas 76305-3799
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Panhandle (Region 1)
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Panhandle Area Alliance
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Permian Basin (Region 9)
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Permian Basin Regional Planning Commission
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Fax: (915) 563-1728

South East Texas (Region 15)
Theo Stone
Region V Education Service Center
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Beaumont, Texas 77703-4299
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Fax: (409) 833-9755

South Plains (Region 2)
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South Plains Community Action Association, Inc.
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South Texas (Region 19)
Arturo Meraz
Laredo Junior College
West End Washington Street
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Phone: (210) 721-5102
Fax: (210) 721-5103

Texoma (Region 22)
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Quality Work Force Planning
One Grande Centre
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Upper Rio Grande (Region 8)
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West Central Texas (Region 7)
Charles Dunnam
West Central Texas Council of Governments
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Phone: (915) 672-8544
Fax: (915) 675-5214

Contacts for Bureau of Apprenticeship Training (BAT) Programs

For information about Texas apprenticeship training programs, contact one of these persons:

Amarillo

Steven D. Opitz, ATR
BAT, U.S. Department of Labor
205 E. 5th Avenue
Room B18, Box F13276
Amarillo, Texas 79101
Phone: (806)-376-2276

Dallas

Raymond Federle, ATR
Wendell D. Sullivan, ATR
BAT, U.S. Department of Labor
6300 Forest Park Road
Dallas, Texas 75235
Phone: (214)-655-6950

Sally Hall, Regional Director
BAT, U.S. Department of Labor
Regional Office
525 Griffin Street, Room 502
Dallas, Texas 75202
Phone: (214)-767-4993

El Paso

Ruben Dominguez, New Mexico State Director
BAT, U.S. Department of Labor
505 Marquette NW
Albuquerque, New Mexico 87102
Phone: (505)-766-2398

Fort Worth

John Piekarski, ATR
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Federal Building
819 Taylor Street, Room 1G04
Fort Worth, Texas 76102
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Houston

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Billee Brotzinger, ATR
Merlin Taylor, ATR
BAT, U.S. Department of Labor
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Houston, Texas 77004
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San Antonio

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BAT, U.S. Department of Labor
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San Antonio, Texas 78216
Phone: (512)-229-4592

Port Arthur

Frank Herring, ATR
BAT, U.S. Department of Labor
Federal Building
2875 75th Street, Room 114
Port Arthur, Texas 77640
Phone: (409)-724-4360

Other Information Sources for Apprenticeship Training Programs

For information about funding for apprenticeship programs, contact:

Toni M. Dean, Apprenticeship Coordinator
Texas Education Agency
1701 North Congress Avenue
Austin, Texas 78701
Phone: (512)-463-9294

For additional information, contact the following:

- Contact local community colleges and/or public school district.
- In the yellow pages of the phone book, search for various trade associations or labor organizations and call about possible programs.
- Contact the State Occupational Information Coordinating Committee at 1-(800)-822-7526 and request a copy of the brochure, *Apprenticeship in Texas.*

Subscribe to:

Student Apprenticeship News ($60.00 per year, issued quarterly)
Jobs for the Future
1815 Massachusetts Avenue
Cambridge, Massachusetts 02140
Phone: (617)-661-3411

Job Training Partnership Act Service Delivery Area Contacts

Fall 1993

TEXAS DEPARTMENT OF COMMERCE

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Quarterly State of Texas Service Delivery Areas (SDA) Directory

GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
ALAMO SDA Mr. Kevin Moriarty, Director City of San Antonio Department of Community Initiatives 215 South San Saba (Zip: 78207) P. O. Box 839966 San Antonio, Texas 78283-3966 (210) 554-7100 FAX: (210) 554-7638	Same as Grant Recipient	Mr. Ramiro Cavazos City of San Antonio Department of Community Initiatives 215 South San Saba (Zip: 78207) P. O. Box 839966 San Antonio, Texas 78283-3966 (210) 554-7100 FAX: (210) 554-7638	Honorable Nelson Wolff Mayor, City of San Antonio Military Plaza P. O. Box 839966 San Antonio, Texas 78283-0001 (210) 299-7040 FAX: (210) 270-4077
AUSTIN/TRAVIS COUNTY SDA Mr. Bill Demestihas Executive Director & JTPA Program Director 2015 South IH 35, Suite 300 Austin, Texas 78741 (512) 440-7816 FAX: (512) 440-9299	Same as Grant Recipient	Mr. Kwaku Agbottah, PIC Chairperson 2015 South IH 35, Suite 300 Austin, Texas 78741 (512) 440-7816 FAX: (512) 440-9299	Honorable Bruce Todd Mayor, City of Austin P. O. Box 1088 Austin, Texas 78767-8865 (512) 499-2250 FAX: (512) 449-2337
BRAZOS VALLEY SDA Mr. Roy W. Kelly, PIC Chairperson Brazos Valley Private Industry Council, Inc. 504 East 27th Street Bryan, Texas 77803-4025 (409) 779-7443 FAX: (409) 822-7758	Mr. Dale Marisco, Chief Administrator & JTPA Program Director Brazos Valley Private Industry Council 504 East 27th Street Bryan, Texas 77803-4025 (409) 779-7443 FAX: (409) 822-7758	Same as Grant Recipient	Honorable R. J. Holmgreen Brazos County Judge Brazos County Courthouse 300 East 26th Street, Suite 114 Bryan, Texas 77803-5359 (409) 775-7400 FAX: (409) 823-6993

TEXAS DEPARTMENT OF COMMERCE

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Quarterly State of Texas Service Delivery Areas (SDA) Directory

GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
CAMERON COUNTY SDA			
Mr. Timo Hinojosa, PIC Chairperson Cameron County Private Industry Council 285 Kings Highway Brownsville, Texas 78521-4231 (210) 548-6719 FAX: (210) 548-6704	Ms. Wanda Garza, Executive Director Cameron County Private Industry Council 285 Kings Highway Brownsville, Texas 78521-4231 (210) 548-6700 FAX: (210) 548-6704	Same as Grant Recipient	Honorable Antonio O. Garza, Jr. Cameron County Judge Cameron County Courthouse 964 East Harrison Street Brownsville, Texas 78520-7123 (210) 544-0830 FAX: (210) 544-0801
CENTRAL TEXAS SDA			
Mr. A. C. Johnson, Executive Director Central Texas Council of Governments 100 South East Street (Zip: 76513) P. O. Box 729 Belton, Texas 76513-0729 (817) 939-1801.	Ms. Susan Kamas, Director of Employment and Training Division Central Texas Council of Governments 200 North Main Street (Zip: 76513) P. O. Box 729 Belton, Texas 76513-0729 (817) 939-3771 FAX: (817) 939-3207	Mr. Charles Hardgrave, PIC Chairperson Mills County State Bank P.O. Box 309 Goldthwaite, TX 76844 (915) 648-2216	Honorable John Garth Bell County Judge Bell County Courthouse P. O. Box 768 Belton, Texas 76513-0768 (817) 939-3521 FAX: (817) 939-6448
COLLIN COUNTY SDA			
Honorable Ronald Harris Collin County Judge 210 South McDonald Street, Suite 626 McKinney, Texas 75069 (214) 548-4635 FAX: (214) 548-7221	Dr. Ike Tennison, Executive Director Collin County Training & Employment Program 321 North Central Expressway, Suite 360 McKinney, Texas 75070 (214) 542-0490 FAX: (214) 542-2444	Mr. John W. Wroten, PIC Chairperson Group Executive EDS 5400 Legacy Drive, H1-5a-05 Plano, Texas 75024 (214) 605-6760	Same as Grant Recipient

TEXAS DEPARTMENT OF COMMERCE

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GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
CONCHO VALLEY SDA Mr. Robert Weaver, Executive Director Concho Valley Council of Governments 5002 Knickerbocker Road (Zip: 76904) P. O. Box 60050 San Angelo, Texas 76906-0050 (915) 944-9666 FAX: (915) 944-9925	Ms. Monette Molinar, Director, Dept. of Employment and Training Concho Valley Council of Governments 5002 Knickerbocker Road (Zip: 76904) P. O. Box 60050 San Angelo, Texas 76906-0050 (915) 944-9666 FAX: (915) 944-9925	Ms. Carolyn Barber, PIC Chairperson CPA, Office Manager Kenneth W. and Wilbur Carr Brown 515 West Harris, Suite 100 (ZIP: 76903) P. O. Box 2690 San Angelo, Texas 76902 (915) 653-6871 FAX: (915) 658-5580	Honorable H. F. Ritchie Mayor, City of Big Lake P. O. Box 300 Big Lake, Texas 76932-0300 (915) 884-2541
CITY OF CORPUS CHRISTI/ NUECES COUNTY SDA Ms. Deborah Seeger, President Workforce Development Corporation Corpus Christi/Nueces County SDA Private Industry Council 5110 Wilkinson Drive Corpus Christi, Texas 78415-3004 (512) 855-7640 FAX: (512) 852-8421	Same as Grant Recipient	Mr. Joe A. McComb, PIC President C/O McComb Relocation Services 622 Power Street (ZIP: 78401) P. O. Box 1678 Corpus Christi, Texas 78403 (512) 888-5907 FAX: (512) 888-4975	Honorable Mary Rhodes Mayor, City of Corpus Christi P. O. Box 9277 Corpus Christi, Texas 78469 (512) 880-3100
CITY OF DALLAS SDA Ms. Laurie Bouillion Larrea Executive Director Private Industry Council of Dallas 3625 North Hall, Suite 900 Dallas, Texas 75219 (214) 522-7191 FAX: (214) 522-8886	Same as Grant Recipient	Mr. Rolando Cordobes, PIC Chairperson Di-REC Services, Inc. 10501 N, Central Expressway, Suite 306 Dallas, Texas 75231 (214) 987-9834 FAX: (214) 265-1204	Honorable Steve Bartlett Mayor, City of Dallas 1500 Marilla Street, Room 5E-N Dallas, Texas 75201-6390 (214) 670-4054

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Quarterly State of Texas Service Delivery Areas (SDA) Directory

GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
DALLAS COUNTY SDA			
Honorable Lee F. Jackson Dallas County Judge Dallas County Administration Building 411 Elm Street, Second Floor Dallas, Texas 75202-3301 (214) 653-7555 FAX: (214) 653-7057	Ms. Laurie Bouillion Larrea, Executive Director Dallas County Employment & Training Program 3625 North Hall, Suite 900 Dallas, Texas 75219 (214) 522-7191 FAX: (214) 522-8886	Mr. Rolando Cordobes, PIC Chairperson Di-REC Services, Inc. 10501 N. Central Expressway, Suite 306 Dallas, Texas 75231 (214) 987-9834 FAX: (214) 265-1204	Same as Grant Recipient
DEEP EAST TEXAS SDA			
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EAST TEXAS SDA			
Mr. Glynn J. Knight, Executive Director East Texas Council of Governments 3800 Stone Road Kilgore, Texas 75662-9604 (903) 984-8641 FAX: (903) 983-1440	Mr. Wendell Holcombe, Director & JTPA Program Director Occupational Training/ Economic Development East Texas Council of Governments 3800 Stone Road Kilgore, Texas 75662-9604 (903) 984-8641 FAX: (903) 983-1440	Mr. David P. Mooney, PIC Chairperson Owner and President Gilmer Cable Television Co. P.O. Box 1004 Gilmer, Texas 75644	Honorable Ken Walker Gregg County Courthouse 101 E. Methuin, #300 Longview, Texas 75601 (903) 236-8420

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GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
FORT WORTH CONSORTIUM SDA Honorable Kay Granger Mayor, City of Fort Worth 1000 Throckmorton Street Fort Worth, Texas 76102-6311 (817) 871-5300 FAX (817) 871-5355	Mr. Richard L. Sapp, JTPA Program Director Employment and Training The Working Connection 4200 South Freewayy, Suite 2300 Fort Worth, Texas 76115 (817) 871-5300 FAX: (817) 871-5355	Ms. Marilyn Hart, PIC Chairperson Vice President/Co-Owner Design Plastics, Inc. 4000 Lubbock Fort Worth, Texas 76110 (817) 921-3131 FAX: (817) 921-0125	Same as Grant Recipient
GOLDEN CRESCENT SDA Mr. H. W. Streitman, Ph.D. Executive Director Golden Crescent Private Industry Council 2401 Houston Highway Victoria, Texas 77901 (512) 576-5872 FAX: (512) 576-4335	Same as Grant Recipient	Ms. Georgia Swickheimer, PIC Chairperson FM 2506, Box 3 (ZIP: 77960) P. O. Box 3 Fannin, Texas 77960 (512) 645-2155 FAX: (512) 645-8502	Honorable Helen Walker Victoria County Judge Victoria County Courthouse Room 127 Victoria, Texas 77901 (512) 575-4558
GULF COAST SDA Mr. Jack Steele, Executive Director Houston-Galveston Area Council 3555 Timmons Lane, No. 500 (Zip: 77027) P. O. Box 22777 Houston, Texas 77227-2777 (713) 627-3200 FAX: (713) 621-8129	Mr. Rodney Bradshaw, Manager & JTPA Program Director Aging/Employment/Training Houston-Galveston Area Council 3555 Timmons Lane, No. 500 (Zip: 77027) P. O. Box 22777 Houston, Texas 77227-2777 (713) 627-3200 FAX: (713) 621-8129	Mr. Allan L. Moody, PIC Chairperson Quanex, Gulf States Tube Division Scott Road & Spur 529 (Zip: 77471) P. O. Box 952 Rosenberg, Texas 77471-0952 (713) 342-5401 FAX: (713) 342-9851	Honorable Ernest McGown, Sr. City of Houston City Hall P.O. Box 1562 Houston, Texas 77251 (713) 247-2009 FAX: (713) 247-2676

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GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
HARRIS COUNTY SDA Hon. Jon Lindsay, Harris County Judge Harris County Private Industry Council ATTN: Deanie M. Diamond, Director 12605 East Freeway, Suite 620 (Zip: 77015) P. O. Box 96100 Houston, Texas 77213-6100 (713) 755-6666	Ms. Deanie M. Diamond Executive Director and JTPA Program Director Harris County Private Industry Council 12605 East Freeway, Suite 620 (Zip: 77015) P. O. Box 96100 Houston, Texas 77213-6100 (713) 451-4257 FAX: (713) 451-6936	Mr. William Morgan, PIC Chairperson 12929 Gulf Freeway, #105 Houston, Texas 77034 (713) 481-5807 FAX: (713) 481-6207	Honorable Jon Lindsay Harris County Judge ATTN: Deanie M. Diamond, Director P. O. Box 96100 Houston, Texas 77213-6100 (713) 755-6666
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HIDALGO/WILLACY COUNTIES SDA Honorable J. Edgar Ruiz Hidalgo County Judge Hidalgo County Courthouse P.O. Box 1356 Edinburg, Texas 78539-1356 (210) 318-2605 FAX (210) 318-2699	Mr. Hollis Rutledge, Executive Director County of Hidalgo Office of Employment & Training 1899 N. Cage (Rear) Pharr, Texas 78577 P. O. Box 1166 Edinburg, Texas 78540-1166 (210) 702-5100 Fax (210) 702-5184	Mr. Hector Cavazos, PIC Chairperson Mission Auto Electric 2416 Live Oak Mission, Texas 78572 (210) 607-8396	Same as Grant Recipient

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GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
CITY OF HOUSTON SDA Mr. Terry Hudson, Executive Director & JTPA Program Director City of Houston SDA Houston Job Training Partnership Council 1919 Smith Street, Suite 500 Houston, Texas 77002-8050 (713) 654-1919 FAX: (713) 655-0715	Same as Grant Recipient	Mr. Walter H. Criner, PIC Chairperson Criner-Daniels & Associates, Inc. P.O. Box 740503 Houston, Texas 77274-0503 (713) 787-0900 FAX: (713) 787-0159	Honorable Bob Lanier Mayor, City of Houston City Hall P. O. Box 1562 Houston, Texas 77251-1562 (713) 247-1888
LUBBOCK/GARZA COUNTIES SDA Mr. Donald J. McCullough, Executive Director & JTPA Program Director JobSource ◆ Lubbock/Garza Counties PIC 1218 14th Street Lubbock, Texas 79401-3201 (806) 765-5038 FAX: (806) 765-6944	Same as Grant Recipient	Mr. Barry Ballinger, PIC Chairperson Plains National Bank 5010 University Avenue Lubbock, Texas 79413 (806) 795-7131 FAX: (806) 791-7382	Honorable David R. Langston Mayor, City of Lubbock 1625 13th Street (Zip: 79457) P. O. Box 2000 Lubbock, Texas 79457-0001 (806) 762-6411
MIDDLE RIO GRANDE SDA Mr. Paul Edwards, Interim Executive Director Middle Rio Grande Development Council 1904 North 1st. P. O. Box 1199 Carrizo Springs, Texas 78834-1199 (210) 876-3533 FAX: (210) 876-9415	Same as Grant Recipient	Mr. Jose Luis Balderas, PIC Chairperson P.O. Box 386 Crystal City, Texas 78839 (210) 374–5440 FAX: (210) 278-1583	Ms. Teresa Sweeten Tax Assessor-Collector Edwards County P. O. Box 378 Rocksprings, Texas 78880 (210) 683-2337 FAX: (210) 683-5376

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GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
NORTH CENTRAL TEXAS SDA			
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NORTHEAST TEXAS SDA			
Mr. James C. Fisher, Executive Director Ark-Tex Council of Governments 911 Loop 151, Suite A (Zip: 75501) P. O. Box 5307 Texarkana, Texas 75505-5307 (903) 832-8636 FAX: (903) 832-3441	Same as Grant Recipient	Mr. James Smith, PIC Chairperson Northeast Texas SDA Highway 259 South (Zip: 75668) P. O. Box 204 Lone Star, Texas 75668 (903) 656-6521 FAX: (903) 656-3355	Honorable James M. Carlow Bowie County Judge 100 North Stateline Avenue Texarkana, Texas 75501 (903) 793-7696 or 798-3040
NORTH TEXAS SDA			
Mr. Dennis Wilde, Executive Director Nortex Regional Planning Commission Galaxy Oil Center #1, North 4309 Jacksboro Highway Wichita Falls, Texas 76302 (817) 322-5281 FAX: (817) 322-6743	Ms. Mona Statser, JTPA Program Director, Training and Job Development Nortex Regional Planning Commission Galaxy Oil Center #1, North 4309 Jacksboro Highway Wichita Falls, Texas 76302 (817) 322-5281 FAX: (817) 322-6743	Mr. Earl Nunneley, PIC Chairperson 601 W. Cedar Nocona, Texas 76255 (817) 825-3222	Honorable Pat Norriss, Mayor City of Burkburnett (Wichita County) 501 Sheppard Road Burkburnett, Texas 76354 (817) 569-2263 FAX: (817) 569-4192

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GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
PANHANDLE SDA			
Mr. Gary Pitner, Executive Director Panhandle Regional Planning Commission 2736 West 10th Avenue (Zip: 79102-1128) P. O. Box 9257 Amarillo, Texas 79105-9257 (806) 372-3381 FAX: (806) 373-3268	Mr. Tom Dressler, Director of Employment/ Training Panhandle Regional Planning Commission 415 West 8th Street P. O. Box 9257 Amarillo, Texas 79105-9257 (806) 372-3381 FAX: (806) 373-3268	Ms. Adair Buckner, PIC Chairperson Attorney-at-Law Buckner, Lara, Swindell & Snell 1616 South Kentucky, Building D #240 Amarillo, Texas 79102 (806) 358-8773 FAX: (806) 373-3268	Honorable Dianne Bosch Commissioner, Place 2 City of Amarillo 5213 Westway Amarillo, Texas 79109 (806) 352-5713 FAX: (806) 373-3268
PERMIAN BASIN SDA			
Mr. Ernie Crawford, Executive Director Permian Basin Regional Planning Commission 2910 La Force Drive, Suite 101 (Zip: 79711) P. O. Box 60660 Midland, Texas 79711-0660 (915) 563-1061 FAX: (915) 563-1728	Mr. Willie Taylor, Employment Director Permian Basin Regional Planning Commission 2910 La Force Drive, Suite 101 (Zip: 79711) P. O. Box 60660 Midland, Texas 79711-0660 (915) 563-1061 FAX: (915) 563-1728	Mr John Foster, PIC Chairperson General Manager KWES-TV P.O. Box 60150 Midland, Texas 79711-0150 (915) 567-9999 FAX: (915) 561-5136	Honorable Wilburn Bednar Glasscock County Judge HC 63 Box 80-D Garden City, Texas 79739 (915) 354-2382
RURAL CAPITAL AREA SDA			
Mr. James Satterwhite, Executive Director Rural Capital Area Private Industry Council 1106 South Mays Street Suite 220 (Zip: 78664-6746) P. O. Box 1565 Round Rock, Texas 78680-1565 (512) 244-7966 FAX: (512) 244-9023	Same as Grant Recipient	Mr. Mike Swayze, PIC Chairperson Pena, Swayze & Company 1717 North IH 35, Suite 300 Round Rock, Texas 78664 (512) 255-2165 FAX: (512) 255-2466	Honorable Rebecca Hawener Caldwell County Judge Cakdwell County Courthouse, Room 307 Lockhart, Texas 78644 (512) 398-1808

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Quarterly State of Texas Service Delivery Areas (SDA) Directory

GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
RURAL COASTAL BEND SDA Mr. Carlos Herrera, Executive Director & JTPA Program Director Rural Coastal Bend Private Industry Council 307 North St. Marys (Zip: 78102) P. O. Box 1780 Beeville, Texas 78104-1780 (512) 358-8941 FAX: (512) 358-2130	Same as Grant Recipient	Mr. Emilio Garza, PIC Chairperson Rural Coastal Bend Private Industry Council 301 Houston Street, Suite 107 (ZIP: 78022) P. O. Box 299 George West, Texas 78022 (512) 449-2255	Honorable Jim Huff Live Oak County Judge P. O. Box 478 George West, Texas 78022 (512) 449-2733 Ext 2
SOUTH EAST TEXAS SDA Mr. Don Kelly, Executive Director South East Texas Regional Planning Commission 3501 Turtle Creek Drive (Zip: 77627) P. O. Drawer 1387 Nederland, Texas 77627-1387 (409) 727-2384 FAX: (409) 727-4078	Ms. Linda Brown Turk, JTPA Program Director Employment and Training South East Texas Regional Planning Commission P. O. Drawer 1387 Nederland, Texas 77627-1387 (409) 727-2384 FAX: (409) 727-4078	Mr. George Gardner, PIC Chairperson 4265 Simpson Dr. Beaumont, Texas 77707 (409) 842-0007 FAX: (409) 722-9407	Honorable Richard P. LeBlanc, Jr. Jefferson County Judge Jefferson County Courthouse P. O. Box 4025 Beaumont, Texas 77704-4025 (409) 835-8466
SOUTH PLAINS SDA Mr. W. D. Powell, Jr., Executive Director South Plains Community Action Association 411 Austin Street (Zip: 79336) P. O. Box 610 Levelland, Texas 79336-0610 (806) 894-6104 FAX: (806) 894-5349	Same as Grant Recipient	Mr. Douglas B. Allen, PIC Chairperson V. T. S. 1012 East Waylon Jennings Boulevard Littlefield, Texas 79339 (806) 385-6451 FAX: (806) 385-6455	Honorable Wayne Whiteaker Lamb County Judge Lamb County Courthouse Room 101 Littlefield, Texas 79339-0706 (806) 385-4222

TEXAS DEPARTMENT OF COMMERCE
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Quarterly State of Texas Service Delivery Areas (SDA) Directory

GRANT RECIPIENT	ADMINISTRATIVE ENTITY	PIC CHAIRPERSON	CHIEF ELECTED OFFICIAL
SOUTH TEXAS SDA			
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TEXAS DEPARTMENT OF COMMERCE

Job Training Partnership Act

Quarterly State of Texas Service Delivery Areas (SDA) Directory

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Introduction to the *Master Plan for Career and Technical Education*

Texas Education Agency
Texas Department of Commerce
Texas Higher Education Coordinating Board

Introduction to the *Master Plan for Career and Technical Education*

(This excerpt is from a comprehensive plan devised by the Texas Education Agency, Texas Department of Commerce, and Texas Higher Education Coordinating Board to guide Texas career and technical education.)

Texas must develop a highly skilled and educated work force to compete successfully in the 21st Century global economy. The keys to future competitiveness are the skills of the people of Texas and their ability as highly skilled and educated people to participate effectively in the workplace, their families, and our society. At both the local and state levels, Texas will create and sustain a world-class career and technical education system that focuses on basic skills and the more advanced technical skills needed by business, industry, and labor. The needs of all young people and adults pursuing education and training are equally important – to have productive careers, to support their families, and to participate as informed citizens in their communities.

The Texas Education Agency, the Texas Higher Education Coordinating Board, and the Texas Department of Commerce work together in a tri-agency partnership to meet this challenge. The Master Plan for Career and Technical Education charts a course which business, industry, labor, education, and training providers can follow to meet these expectations of Texans. The Master Plan addresses the interrelated issues of work force development, economic development, educational excellence, access, and equity by focusing on five major goals: student/adult learner needs; business, industry, and labor needs; faculty and staff needs; statewide communications; and adequate resources.

Work force development policies in Texas must be based on the encouragement of individuals to increase their skills and to assume greater responsibility in the workplace so that they can and will improve the competitiveness of the Texas economy. Everyone must develop lifelong learning skills. Students still in school or college (the pre-employed), individuals who need new skills or retraining (those currently employed), and displaced and non-working adults (the unemployed) all face this challenge. A seamless, learner-oriented education and training system that serves all people must provide a range of coordinated educational programs and services. Texans should be able to enter, exit, and re-enter career paths easily in response to changing labor markets and job requirements.

The Texas Department of Commerce will provide workforce development and economic development linkages to education. Employers indicate that work force development is the most important factor for economic development in Texas. Commerce will encourage the private industry councils (PIC) and the Job Training Partnership Act (JTPA) Service Delivery Area (SDA) administrators to assume a leadership role in involving the business sector in the design and implementation of local programs. Commerce will encourage program operators to develop new incentives for JTPA participants such as SCANS competency training, internships, work-based learning opportunities, apprenticeships, and customized education and training opportunities that lead to high skill, high wage jobs. Commerce will work with the private industry councils to involve the business sector to connect school to the workplace through programs funded through the JTPA Title II funds. Commerce will provide training and technical assistance to PICs and SDAs to assist in their participation in education coordination projects for career guidance, skill standards and certification, one-stop shopping, and automated learner follow-up. The Texas Skills Development Program will provide strategic planning and marketing strategies for businesses and education to upgrade the skills within business and education settings.

The Quality Work Force Planning system and the Tech-Prep High School and Associate Degree Program represent unique Texas approaches to **local and state coordination** emphasized in the Master Plan. Quality Work Force Planning Committees play a crucial role in identifying key regional industries and targeted occupations. The Committees provide leadership and assistance in program planning and identification of clear career paths. Tech-Prep consortia use the information provided by the Quality Work Force Planning Committees to implement programs for targeted occupations that provide students with the skills that employers require. Both initiatives bring together education and training providers, business, industry, and labor to use the limited educational resources of our communities and our state more effectively in a changing economy.

Economic development policies can do more than generate or retain jobs for Texas business and industry. Employers should be encouraged to shift to high-performance workplace organizations to enhance their chances of success in the competitive, global marketplace. Employers who focus on quality and meeting customer needs will require skilled employees who are generally trained by public schools and colleges. These employees will expect and deserve wages commensurate with their skills, supportive benefits, and equitable workplace policies.

Texas should adopt **a high skills/high wages policy** that surpasses those of its European and Asian competitors. The tri-agency partnership will bolster this policy through the efforts of 24 Quality Work Force Planning Committees, 25 Tech-Prep Consortia, and other school-to-work transition programs including efforts for transition of those with disabilities. These initiatives are consistent with the Governor's Smart Jobs Plan which calls for a high skills/high wages policy in Texas. The Smart Jobs strategies require proper coordination of statewide systems. The Master Plan through the tri-agency partnership reflects effective joint planning and policy development for career and technical education.

Career and technical education in Texas must focus on **educational excellence** defined by world-class standards. To be identified as world class, career and technical education programs and services in Texas should be responsive to the needs of employers and sufficiently flexible to allow youth and adults to select career paths which provide effective transitions from the classroom to the workplace, and back to the classroom as new skills are needed. The basic skills and workplace competencies identified by the Secretary's Commission on Achieving Necessary Skills (SCANS) should be integrated into curricula at all levels of public school and college instruction. Business, industry, and labor should be supported in their efforts through the Texas Skills Development Program and other tri-agency efforts to identify industry-specific skill standards. Such standards will allow students and employers to measure learner and program performance based on the skill level required for employment.

Educational excellence requires **equity and access**. All students can and must learn if Texas is to compete and prosper during the next century. Career and technical education should be designed to eliminate significant differences in learner achievement related to race/ethnicity, gender, disabilities, and income. Programs and services should be accessible to all students and should provide maximum opportunity for individuals to demonstrate their abilities and for our communities to benefit from the combined, productive efforts of all Texans. The tri-agency partnership will place a high priority on statewide communications regarding the positive impact of career and technical education on the lives of individuals and on the economy in Texas. Every dollar invested in quality education and training must increase the knowledge and skills of learners, thereby reducing the probability that even more dollars will be necessary later to sustain the unemployable through welfare or criminal justice systems.

This Master Plan measures **results** in terms of two essential areas of successful student/adult learner outcomes. First, success will be measured consistently in terms of skills demonstration, program completion/graduation rates, and pursuit of additional education or training. Second, success will also be measured in terms of employment after training: job placement related to training, earnings, and progression along career paths to high skill/high wage jobs. This will assure Texas citizens of true accountability measures that demonstrate the return on investment of their public education and training resources.

In addition, the tri-agency partnership will support the following statewide initiatives to ensure successful attainment of the Master Plan's goals:

- infusion of SCANS basic skills and workplace competencies into integrated (acdemic and career/technical) curricula based on skill mastery;
- identification and use of industry-based occupational skills standards (including entrepreneurship) to develop curricula for high skills/high wage occupations;
- implementation of a comprehensive career guidance and information system for students/adult learners to ensure effective assessment of needs and access to flexible career paths;
- expansion of an automated student/adult learner follow-up system to ensure accountability by successful individual outcomes;
- development of models for one-stop client assessment and referral for education and training; and
- professional development and staff training related to these initiatives.

The success of the Master Plan depends upon strong partnerships between education and training providers and representatives of business, industry, and labor. Working together through Quality Work Force Planning Committees, Tech-Prep consortia and other cooperative efforts, we will provide the leadership and advocacy to change dramatically our state's approach to career and technical education. Sound planning and evaluation will be needed to measure learner outcomes, program improvement, and institutional change. To achieve this mission, all participants must value career and technical education and have high expectations for every student in Texas.

For a copy of the entire *Master Plan for Career and Technical Education*, contact:

Publications Distribution Office
Texas Education Agency
1701 North Congress Avenue
Austin, Texas 78701-1494
Phone: (512) 463-9744

School-to-Work Transition Survey Form

Texas Education Agency Clearinghouse

Survey on School-to-Work Transition Programs

1. **What components should be included in successful school-to-work transition programs?**

2. **Please describe three programs in your area (or in Texas) that you feel successfully prepare students for the transition from school to work. (If you would like to tell us about more than three, please attach another sheet of paper.)**

   2a. Name and location of your first program:

   Contact person, if known: ______

   Contact's telephone number, if known: ______

   Describe the program:

   What makes this program successful?

2b. Name and location of your second program:

Contact person, if known:

Contact's telephone number, if known:

Describe the program:

What makes this program successful?

2c. Name and location of your third program:

Contact person, if known:

Contact's telephone number, if known:

Describe the program:

What makes this program successful?

3. **When you say these three programs are successful, what criteria are you using to guage their success?**

4. **What changes do we need to make at the national, state and local levels to help students make a successful transition from school to work?**

5. **Is there anything else you would like to tell us?**

6. **How can we contact you to follow up on your comments?**

Your name: ______

Organization: ______

Telephone number where we can reach you: ______

Please return this survey to
Texas Education Agency Clearinghouse
Texas Education Agency
1701 North Congress Avenue
Austin, Texas 78701-1494-1-(800)-643-7025

ATTN: Rebecca Patterson

Thank you very much for your time and valuable assistance!

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Page 39: Bowie High School, Austin ISD, Austin, Texas

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Page 96: KEYS Learning Center, Euless, Texas

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Page 104: High School for Law Enforcement and Criminal Justice, Houston ISD, Houston, Texas

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TITLE VI, CIVIL RIGHTS ACT OF 1964; THE MODIFIED COURT ORDER, CIVIL ACTION 5281, FEDERAL DISTRICT COURT, EASTERN DISTRICT OF TEXAS, TYLER DIVISION
Reviews of local education agencies pertaining to compliance with Title VI Civil Rights Act of 1964 and with specific requirements of the Modified Court Order, Civil Action No. 5281, Federal District Court, Eastern District of Texas, Tyler Division are conducted periodically by staff representatives of the Texas Education Agency. These reviews cover at least the following policies and practices:

(1) acceptance policies on student transfers from other school districts;

(2) operation of school bus routes or runs on a nonsegregated basis;

(3) nondiscrimination in extracurricular activities and the use of school facilities;

(4) nondiscriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning, or dismissing of faculty and staff members who work with children;

(5) enrollment and assignment of students without discrimination on the basis of race, color, or national origin;

(6) nondiscriminatory practices relating to the use of a student's first language; and

(7) evidence of published procedures for hearing complaints and grievances.

In addition to conducting reviews, the Texas Education Agency staff representatives check complaints of discrimination made by a citizen or citizens residing in a school district where it is alleged discriminatory practices have occurred or are occurring.

Where a violation of Title VI of the Civil Rights Act is found, the findings are reported to the Office for Civil Rights, U.S. Department of Education.

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The Texas Education shall comply fully with the nondiscrimination provisions of all federal and state laws, rules, and regulations by assuring that no person shall be excluded from consideration for recruitment, selection, appointment, training, promotion, retention, or any other personnel action, or be denied any benefits or participation in any educational programs or activities which it operates on the grounds of race, religion, color, national origin, sex, disability, age, or veteran status (except where age, sex, or disability constitutes a bona fide occupational qualification necessary to proper and efficient administration). The Texas Education Agency is an Equal Employment Opportunity/Affirmative Action employer.

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